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# THE SCOTTISH TRADITION IN ECONOMIC THOUGHT[1]

## I

THIS essay must start with a confession. In undertaking, some months ago, to submit an article on some such subject as 'The Scottish Tradition in Economic Thought', I was, it is now clear, in a state of not very creditable ignorance. I had then a rather vague idea that one could in an article say something directly significant on this subject. I had, of course, at various times read the Scots classics in a rather haphazard way; but the effect of reading them all straight through in their proper sequence, in the hope of tracing the individual Scottish thread running through them—the effect of this has been radical. For it has forced the conviction that there is a quite specific doctrine and method in Scots economic thinking, especially clear and influential between roughly 1730 and 1870, and still alive, if not on top. As it shows some of the greatest names—Hume, Smith, the Mills—and also some considerable satellites—Hutcheson, Lauderdale, Rae, McCulloch—it at once appears that a mere article will not do. If there is a Scottish line inspiring these great writings, then only a volume could do it justice. The kind of thesis one would like to examine is the view that between Hutcheson and John Stuart Mill it was that Scottish mode of approach that formed the atmosphere of British economic thought. But this starts many other hares, and the most we can do here is to chase some of them conscientiously.

Our general theme must then be that there is a characteristic Scottish attitude and method which is important in the history of economic thought. It may be called the philosophical approach, though

[1] Delivered at the Annual General Meeting of the Scottish Economic Society on 24th March, 1955.

many may prefer to call it, equally aptly, the sociological approach. This is not the dominant approach today in academic teaching—the scientific or analytical method holds that place everywhere—but in Scotland the traditional approach is still alive and influential.

It should then be our business to show that this Scottish method and interpretation grew in a definitely historical setting. It grew out of the Scottish soil and reflected truly the Scottish atmosphere. To establish this one would need to describe at least four influences which nourished it. First, there is the place of Scots social thinking in the stream of European culture and history. The Scots gave it their own typical turn but their thought is in the broad Stoic stream. It was brought to its highest pitch by Hutcheson, Hume and Smith. Rather more speculatively, it was alive and dominant in the Mills. Then this Scottish method has its simple everyday reflection in the teaching and curricula of the Scots universities, especially Glasgow in the period between Carmichael and Smith, and later Edinburgh. This we need to prove the persistence, the natural roots of the method. It has formed the seed-bed of Scots students and teaching—all of them in all our Scottish universities—right back to link up with the Middle Ages. This in turn reflects the character and interests of the Scottish people, and they again have their special contacts and friendships with the Continent, practical contacts shaping the education of the people who provided the leaders in Scotland till after the '45.

It will then be necessary to show how this approach and method were at work in the classical sequence up to and including the Mills. It was indeed working in Marshall, though more as a climate than as the guiding line. Is this not the way in which his faithfulness to the classic line, on which he so insisted, took effect? Certainly Jevons was the more typical English exact scientist. But we must not digress. An equally strong claimant as a fact is the decline of the philosophic method from its dominant position, or from being a pervading atmosphere, after about 1870. Along with this we have to note the relative decline from eminence of Scots economic thinkers. After the Mills no Scot reaches the heights in economic theory, and after Marshall there are no more 'three-deckers', no comprehensive philosophic surveys of economic theory. Whether this is because the Scot can be great only when he may also philosophise is a matter for speculation.

Then finally one 'lone star' influence that demands notice is the fact of Smith's genius. Genius can have strange indirect effects. Its brilliance often extinguishes other valuable, though lesser lights. This is not due to any lack of sources in Smith's work ; they are all there. But successors cannot continue on the level of genius. One aspect of

the great man, probably that which suits later conditions, is chosen, much of the rest probably rejected. The section of Smith's work which was so chosen and developed till it became supreme was the first two books of the *Wealth of Nations*. The theory of static equilibrium there so carefully sketched has grown into an analytic system and method which has for long dominated English-speaking universities, and our universities today control our theory as never before in modern times. It is a paradox of history that the analytics of Book I, in which Smith took his own line, should have eclipsed the philosophic and historical methods in which he so revelled and which showed his Scots character. Book I of the *Wealth of Nations* is now a part of world thought, as is the *Origin of Species*, or *Principia Mathematica*. But even so we cannot speak for the future. The positive analytic method is a mere stripling. An immense future stretches ahead ; and the past certainly shows that each phase of social development produces its own philosophy and method in all the social disciplines. Do those signs of today which spell out the future show any special call for the sociological method? If so, a Scottish revival is due. An opportunity is opening for Scottish thinkers.

## II

We begin then with the thesis that there is a unique Scots method, or approach, or interpretation of social issues, as individual as any personal approach, and that it can be described as philosophic or sociological. It rises to maturity in the eighteenth century, especially through the work of Hutcheson, Hume and Adam Smith. They gave it its unique bite and flavour, though the flavour depends on the Scottish soil and cultivation in the propensities and institutions of the people. This is seen in the course of writings taken as their normal education by all the members of this close-knit group—between Edinburgh and Glasgow. The course began with Natural Theology (including some Natural Philosophy), went on to Moral Philosophy, and thence to Justice and Law. It was under the law of contract and private property, with its social aspects, that the broad descriptive and critical comments on political economy arose (the kind of discursive comment *ambulando* which the philosophic method naturally and richly inspires). This accepted sequence is found in all the writers—in Gershom Carmichael, Adam Ferguson and Dugald Stewart as much as in the great trinity. It also dominates the method and point of view of Lauderdale and Rae, though after Smith the more specialised treatment of economics inevitably begins. Each writer may give his

work a special slant towards his own special interest: Hutcheson towards morals, Hume towards metaphysical scepticism and also history, Ferguson towards sociology and Smith towards economics. Smith, however, like Hume, adds the crown of genius, and genius is apt to confuse the inevitabilities of logic. It also shapes history in a way which may obscure the roots and setting of the writer. Thus, just because Smith is a world figure, we are apt to ignore his completely Scottish character. We cannot begin to understand him, especially what are often thought of as his weaknesses, if we thus ignore his roots, for the Scottish method was more concerned with giving a broad well balanced comprehensive picture seen from different points of view than with logical rigour. In fact, Smith was, like the others, a philosophic writer, modelled on Hutcheson, whom W. R. Scott truly called the 'preacher-philosopher'. His aim was to present all the relevant facts critically. Modern writers start from a totally different angle. They found on the law of non-contradiction. They aim at isolating one aspect of experience and breaking it down by analysis into its logical components. Thus the older type of writer is often accused of 'inconsistencies', and certainly these are to be found, especially in Hutcheson, whose pupil here Smith certainly was. To the analyst such inconsistencies are anathema. To the modern method they represent failure. But to the philosopher they reflect the facts of our experience. It is part of wisdom to recognise, accept and be able to carry such inconsistencies. While we should of course try to reduce them, we should not insist on avoiding them in our critical descriptions, for then we omit the crux of our fate, and also the practical human problem.

This attitude is still very much alive in the Mills. James is the most sociological of the Benthamites and his valuable historical and psychological expansions are in the true synthetic tradition. The son of course is both the jack and master of all trades. If one reads through the *Logic*, the *Political Economy*, and the main ethical and political writings in one gulp, the sheer wide power, range and status of this mind cannot be missed. But the 'improvement' bacillus is always at work in it, inspiring and driving—the optimistic tough individual practical belief in wide human improvement reflected down from Hutcheson and Smith. The Utilitarian movement is itself, of course, a philosophy. But as a philosophy it is English rather than Scottish, especially in its positivism and its willingness to be dominated by facts. Bentham gave it these main characters; by contrast the Scottish qualities in the Mill writings are unmistakable.

But is the attitude and tradition still alive? Well, it has to be confessed, only in a rather negative way. Scots teachers and writers are today certainly primarily interested in the historical or the social and critical sides of economics. They of course teach the analytics, the perfected system of Marshall's *Principles*. But that is a world movement. They were themselves brought up in it. The writings of Scots economists are, however, still coloured by the traditional Scottish point of view. One hint, significant if slight, anyone immersing himself in this literature can hardly miss. In the Scots writings up to recent times there is hardly, so far as I can find, one serious example of the use of mathematics to develop analysis. (The Hutcheson example is well known. He removed the mathematical passage in the second edition of the *Inquiry concerning Beauty and Virtue*.) Some may contemplate this fact with relief. The whole Scots sequence cleaves to actual events, to historical and institutional relations growing through them, and to the individual experiences that support and develop the argument. But such individual factors do not lend themselves to mathematical or purely deductive logical treatment. It is not the case that there is any relative weakness in the Scot in mathematics. The facts certainly prove the opposite in the eighteenth and nineteenth centuries, in Glasgow and Edinburgh.[2] The obvious explanation is that the Scottish philosophical and the mathematical methods do not blend. The assumptions in the first are normative, in the second exact. For this very reason, mathematical processes are especially grateful to the English exact positive scientific approach in economics. It is no doubt a useful contrast of methods within our small island. Ideally, the one should stimulate the other.

It should be noticed here that this approach is reflected in the curricula of the Scots universities, and always has been. It has been bred into Scots thinking over all the generations, and is now steadily acquired as well as inherited. This can be illustrated by the curricula of the eighteenth century. The course was in Humanity and Greek, Philosophy (metaphysical and natural), Logic and Moral Philosophy, and, less securely though it was always there, Mathematics.[3] It is here interesting that in August 1695 'the Faculty at Glasgow appointed " Mr. John Tran . . . to compose the Ethics, Oeconomics and Politics " for the general course in philosophy which the Parliamentary Com-

[2] For the seventeenth century *see* H. W. Meikle, *Some Aspects of the later seventeenth century in Scotland*, p. 25.

[3] The Chair of Mathematics in Glasgow dates from 1691 but it was not until 1826 that the subject was formally admitted to the curriculum for the degree of M.A. This seems to have kept down the number taking the subject. But the record is creditable, especially in the great period. Cf. Mackie, *The University of Glasgow*, p. 216.

mission of 1695 was seeking to arrange by agreement between the four Scots universities'. This was only a tidying operation, for the disciplines were already established in all the universities. Lively individual preferences, as might be expected, prevented any common course from ever reaching print, so Mr. Tran's course is not available; but the fact stands out that as early as 1695 'Oeconomics and Politics' were established studies for the graduands.

We should never forget that Adam Smith grew from these roots; that his work is as influenced by them as any writer's could be; and that it could not have grown from any but just such an exactly and richly cultivated soil. This fact has been obscured by the unfortunate inadequacy of Scottish histories of the seventeenth century. Yet, as H. W. Meikle insisted in his Murray Lecture, the foundations for the future cultural growth were in fact largely laid in Scotland in the seventeenth century. Adam Smith was taught in a burgh school in Kirkcaldy, and later in the normal courses of a Scots university he built up the knowledge, methods and aims of his own thinking. He was not building on air or mere personal talent, as popular records are apt to suggest. We should remember such strategic events as these: The Advocates' Library began its modern career in 1682, and, as Dr. Meikle insists, it was one of the vital vehicles of Scottish culture. Again, Stair's *Institutions of the Law of Scotland* appeared in 1681. This is the scientific genesis and inspiration of Scottish jurisprudence, and is itself a unique work by any standard. It was from such stems that Smith's genius was bred. The foundations remain to this day. No Scottish student in Arts can take a pass degree without a philosophy, and the Honours courses are based on the width of the pass degree, as knowledge of at least four subjects is required in it though modern specialisation has made some inroads). This training has no doubt encouraged a people more interested in a philosophic argument (and in persuading other people that he, the teacher, is right) than even in getting what one wants. (Does not the Englishman typically make exactly the opposite choice?) The Scots theological interests and relations should also be mentioned, but cross illustrations will grow as we proceed.

We note next that this local movement of thought was itself also a reflection, though as an original facet; a reflection of what was perhaps the major European stream. It is the great flow from Stoicism. But the Scottish inspiration came rather through the Roman glosses than from the Greek sources. Cicero, Marcus Aurelius, Seneca, Epictetus, these were Hutcheson's mentors (though Leechman mentions the way he encouraged Greek studies). Hume's references are to the

same texts, and so it is for all of them. They did not—they were not trying to—dig so deep as the mighty Greeks. They were painting a broad practical sketch of society, expressing all the important balances, not exposing the roots. For these slightly superficial surveys the Roman texts were invaluable models. As an example, take Hutcheson dealing in their typical way, later followed by Hume and Smith, with the advantages of social life. He quotes Cicero (*De Finibus*) on the advantages of a population sufficient to allow of division of labour. The passage has his usual optimistic flavour. It does not appear in his treatment of economy, and it is interesting as showing the social origin of the Scottish treatment of division of labour rather than the more individualistic source described by Locke. But this so fruitful treatment of division of labour is still embedded in an ethical, political, legal argument.[4] It was Smith who was inspired to effect its transference, to form the premiss of a purely economic argument and so give a new science its task and direction.

The Stoic influence in Scottish thought is most apparent in the constant study of Law. Especially on the practical side of this philosophising, the argument was carried by discussions of property rights and origins, or by questions on contract, particularly in relation to land. This appears in the first teacher of the school, Gershom Carmichael, under whom Hutcheson studied and whose major work was the editing of the text of Puffendorf. So we are back to the broadest river in European culture, the Stoic-inspired Roman jurisprudence, carried practically throughout Europe on the broad currents of Roman and Canon Law. The richest contacts for Scotland came from France and Holland. (The French, like the Scots were more deeply versed and skilled in Latin than in Greek.) In our Glasgow school this comes through directly in the study of Puffendorf, and especially of Grotius, whom Smith read under Hutcheson. This tradition pervades the *Wealth of Nations*, but in a Scottish dress. It is optimistic, tolerant, always eager for social benefits between as well as within nations, very different from the nervous, individualist, critical, touchy excursions of the revolutionary French writers. This good temper the school owes at least as much to Hutcheson as to Smith. Leechman, who was a pupil of Hutcheson and later became Principal in Glasgow, has described Hutcheson's personal attitude in words which apply equally to Smith, and indeed to Hume and all the Edinburgh writers. In spirit, aim and conduct they were citizens of the world, and they behaved as such.

[4] This passage occurs in Vol. I, p. 289, of *A System of Moral Philosophy*, in a discussion of 'the necessity of a social life'. It is quite separate, in place and subject, from his treatment of economic values which occurs in Vol. II, Ch. 12, embedded in his consideration of contracts.

The world was smaller then and more harmonious, but these sympathies and contacts still struggle to live in Scotland today.

These scrappy remarks are all that space allows here. The place of Scottish thought in the main stream of European jurisprudence is a subject that grows in subtlety and scope the more one learns about it. It would need a long chapter in any volume dealing with our subject. Its literature is as massive and difficult as any Europe's thought can show. But there is a more popular level of interpretation, and it may be useful to suggest in a footnote some simple writings that at least serve as introductions or summaries.[5]

The main faith which the Law of Nature and Stoicism inspired in Scotland was a faith in natural liberty in a natural society. Here certainly Smith was Hutcheson's faithful disciple. Of Hutcheson, Leechman tells us : ' As he had occasion every year in the course of his lectures to explain the origin of government, and compare the different forms of it, he took peculiar care, while on that subject, to inculcate the importance of civil and religious liberty to the happiness of mankind : as a warm lover of liberty, and manly zeal for promoting it, were ruling principles in his own breast ; he always insisted on it at great length, and with the greatest strength of argument and earnestness of persuasion : and he had such success on this important point, that few, if any, of his pupils, whatever contrary prejudices they might bring along with them, ever left him without favourable notions of that side of the question which he espoused and defended '. Smith certainly was so influenced with the others. But our view of natural liberty in the *Wealth of Nations* has received a deceptive twist from history, from the individualism of the industrial developments, and the interpreters, apologists and critics, of the Industrial Revolution. This twist does not do balanced justice to Smith's own feeling about natural liberty : here he followed his teacher, and was in a broad way, at one with his fellow writers. The arguments were thrashed out in relation to the American colonists. On this, though earlier, Hutcheson was at least as liberal and decisive as Smith.[6] And the extent to which Smith's imagination could range is seen in his suggestions for federal government in a unified British family. Here again we have to make an effort of historical imagination to see what our classic fathers

[5] *Legacy of the Middle Ages* (Meynial on Roman Law) ; *Cambridge Medieval History*, Vol. V (Hazeltine, Roman and Canon Law) ; Vinogradoff, *Roman Law in Medieval Europe ;* Bryce, *Studies in History and Jurisprudence, Holy Roman Empire;* James Macintosh, *Roman Law in Modern Practice;* and J. N. Figgis, *From Gerson to Grotius.*

[6] Cf. *The William and Mary Quarterly*, Vol. XI, No. 2 (April 1954). For Hutcheson the article by Professor Caroline Robbins (a grateful name) is specially interesting. The whole number is very relevant.

wanted and appreciated. We are so apt to read our own wants, especially in terms of some index number of the standard of living, into their more closely-knit social and cultural aspirations. Perhaps this quotation from Hume expresses their hopes as tersely and vividly as we have space for: 'The more these refined arts advance, the more sociable do men become; nor is it possible that, when enriched with science and possessed of a fund of conversation, they should be contented to remain in solitude, or live with their fellow-citizens in that distant manner which is peculiar to ignorant and barbarous nations. They flock into cities; love to receive and communicate knowledge; to show their wit or their breeding; their taste in conversation or living, in clothes or furniture. Curiosity allures the wise; vanity the foolish; and pleasure both. Particular clubs and societies are everywhere formed, both sexes meet in an easy and sociable manner, and the tempers of men, as well as their behaviour, refine apace. So that, besides the improvements which they receive from knowledge and the liberal arts, it is impossible but they must feel an increase of humanity from the very habit of conversing together and contributing to each other's pleasure and entertainment.' Natural liberty is a very different sentiment when inspired by the aim of 'an increase in humanity' from that pervading business specialisation. But it was this society as a glorified Athenaeum that these eighteenth century Scotsmen desired, and indeed to a creditable, if limited, extent achieved.

It might here be convenient very briefly to recall some of the more influential factors in these Scottish contacts; especially with France and Holland. The natural enemy was England, and this lingered, so far as influences went, into the early eighteenth century. So the inevitable friends were found in the Low Countries and France. Professor Mackie remarks: 'There was much coming and going between Scotland and France, where until about 1670, the government accorded to the Hugenots the privileges promised by the Edict of Nantes in 1598, and it is obvious that in the world of western scholarship the man from Glasgow could fully hold his own.' That he did so can be gathered, on a popular level, from such a study as *The Scot Abroad* by John Hill Burton. The direct evidence is scattered over the memoirs of scholars, statesmen and fighting men in all the literatures of Europe. The Reformation paved the way for a possible partnership with England but the balance swung decisively only in the eighteenth century. We need merely mention the economic ties with the Low Countries. Only 1707 with its gradual opening of freer trade for Scotland, and the swing towards the west in commercial expansion, displaced these predominant links with the Continent. Of equal

influence, especially in the sixteenth and seventeenth centuries, were the religious contacts. Scottish churchmen in their many see-saw evasions tended towards Holland, Geneva, even France, rather than towards England.

The evidence here is well known. What was important was the personal and social impact of these contacts. It is best realised through the diaries—again a formidable library. But four famous later ones can be recalled—those of 'Jupiter' Carlyle, Ramsay of Ochtertyre and Cockburn, and, most intriguing of all, the recent Boswell volumes. There is also a lesser known one, from which a passage seems worth quotation, because it reflects vividly a swing in Scottish social habit; it comes from *John Fergusson 1727-50 (An Ayrshire Family in the 'Forty-Five)* by James Fergusson. Lord Kilkerran, a Court of Session judge, is concerned about the education of his son, the subject of the biography. He wishes a legal training such as will suit him to care for the Ayrshire estate. 'John's education', we are told[7] 'had advanced to the university stage when, in the autumn of 1743, his father decided that it should be completed in England. It was an unusual decision for those days. For generations past Scottish boys, especially students of law, had gone to the continent to seek such instruction as they could not get at home. This was partly because of the long wars with England and the traditions of continental alliances and friendships they left behind. Moreover, English universities were not open to Presbyterians, nor, if they had been, could the Roman Law, on which the Scottish legal system is founded, be studied there so well as in the Netherlands, where Lord Kilkerran himself had gone as a young man, and many of his contemporaries.' The boy was placed at Dr. Dodderidge's (dissenting) Academy at Northampton. In a letter to the reverend doctor the father says, 'The boy is seventeen since July last, and after being taught Latin and Greek at a publick school[8] with the assistance of a tutor, has been one year at the University with Mr. Maclairn, Professor of Mathematicks, whose name will not be unknown to you. What his proficiency has been in the languages I shall not anticipate your judgment, and as they are of great use in life, especially the Latin, for the study of Roman law, to which I intend he shall apply himself, I hope it will not be out of your way to improve him in the knowledge of that language. The Greek I know you are more fond of in England than we are here, and for gentlemen educated for the church it is absolutely

[7] *Op. cit.*, p. 25.

[8] The High School of Edinburgh. The mathematician is Colin Maclaurin, of the *Treatise on Fluxions.*

necessary, but otherwise I consider it only as a part of the belles lettres.'

This no doubt marks a social watershed. Thereafter, in growing volume the contacts are English. In the earlier diaries, however, we feel the strength of the personal influences. They are mainly centred round the Law and the Church. The leaders of Scotland depended on the management of their estates, or aimed to acquire estates. The law they must know was feudal and Roman, and the pre-eminent schools of such law were in Holland and France. Every man of property, intent on the education of his heirs, inevitably sent them on their Continental travels. In this regard, it is one of the smaller compensations of Boswell's swing to good behaviour that he turned (with such agonising) to Holland and the traditional road for Scottish finish, for one could desire no more complete short account of the type of studies young Scotsmen followed than that in *Boswell in Holland,* and the spice of genius is added, as ever with Boswell. Part of the genius brings us to the heart of the personal life for the many Scots who share in Boswell's gaieties. But they are all very serious also, as one would expect of the breed. We certainly feel their determination to master any knowledge which will help them to manage their Scottish affairs. The same practical spirit and thoughtful comparative study of foreign institutions also flavours Sir James Steuart's volumes.

In their social gatherings the Church and the men-at-arms are the other main contributors. From the diaries we can sense the strength of the eclectic tradition. They are typically curious about people, men at work, about comparative institutions and what we would call 'social statistics'. They are not concerned with logical processes or sequences, or the framing of abstract hypotheses and their analysis to their utmost limits. They wish to build a truly balanced picture of social life as they found it and the forces which controlled it. Here it must be insisted Adam Smith is a true Scot of the eighteenth century. He had the common Latin Continental scholarly basis (how strange to find his library so full of Stoic texts, so almost entirely devoid of technical economic texts). He is not consciously concerned with building a logical model, or even with arguing in the merely logical mode. We should note his inconsistencies, but we should remember that they are the reflections of the method. Each aspect, the analytical, the historical, the contemporary-comparative (or sociological), is dealt with in turn. The inconsistencies arise out of these different aspects, and so out of real conditions. In Book I we have the analytics, and they bore such great issue that Book I has almost obliterated the rest in the world's estimate; but the rest is at least as characteristic of

Smith as Book I. It is the *whole* book which represents his meaning.

Next in this family history come that unique father and son, James and John Stuart Mill. That this is fact some may contest ; especially outside Scotland they may not be recognised as full-blooded Scots. Their effective lives were spent in the metropolitan circles of British culture, and they spent their lives in advocating a social theory and policy which are generally regarded as English, though they are more truly British. Certainly, we ought to accept the son's own words that *philosophically* he was no Utilitarian. One could spend an article on each of these issues ; here we can only summarise. About James Mill there is really no question. To the end of his days he was as Scots as his native Angus (and the breed there is strong). Of his type he is really a very Scots Scotsman, so Scots that the parishioners who heard his early 'tasting' sermons could not thole him. No doubt a church is one of the few places in which a Scotsman submits to being told, but evidently the burning ardour to teach that was James Mill's enduring dynamic in life took intensities which even they were not prepared willingly to stomach.

His story is as typical a Scots success story as one could find. He had the special qualities and virtues of the Scottish approach, and he brought them from Scotland via Edinburgh University. He was interested in all social forces and structures. There are the usual exercises in comparative sociology in both the *Elements* and the *History of British India.* (In the latter there is an interesting reference to the work of John Millar in Glasgow ; a direct link between the tradition's source and the modern classical sequence.)[9] And of course he shows the eclectic interests that are so Scottish, especially in his wide psychological insights. The simple clarity of his thought and style reflect his great Scottish predecessors (of the east rather than the west coast). Indeed his very clarity may explain why he has been so constantly underestimated. Obscurity is one way to temporary reputation. Ricardo's *Principles* is, to most non-specialists at least, unintelligible if they try to consider the book as a coherent system.[10]

[9] Mill quotes Millar as an authority on three occasions : in important footnotes on the English constitution, slavery in primitive times and the position of women in North American tribes. Calling him 'that sagacious contemplator of the progress of society', he later remarks that 'the writings of Mr. Millar remain about the only source from which the slightest information on the subject can be drawn', the subject being civilisation among the Hindus. I am indebted to Dr. R. L. Meek for this reference.

[10] Need it be said that no criticism of Ricardo is here intended ? His contribution to economics is shining and accepted. But many will agree with Schumpelter's summary : 'Ricardo's *Principles* are the most difficult book on Economics ever written. It is difficult enough even to understand it, more difficult to interpret it, and most difficult to estimate it properly' (*Economic Doctrine and Method,* p. 80).

So it is probably Mill's translation of it in his *Elements* that in the earlier period carried the original work into the central consciousness of ordinary British thinking. For Mill's little book is entirely clear, though it is probably as near to what Ricardo meant as anyone is likely to get, which may not be very near. But further, here, and most distinctly, the economic theory is placed in its proper relation to the other social sciences, in the true Scottish manner. 'It is also,' he writes, 'in a peculiar manner, the business of those whose object it is to ascertain the means of raising human happiness to its greatest height, to consider, what is that class of men by whom the greatest happiness is enjoyed. It will not probably be disputed, that they who are raised above solicitude for the means of subsistence and respectability, without being exposed to the vices and follies of great riches, the men of middling fortunes, in short, the men to whom society is generally indebted for its greatest improvements, are the men, who, having their time at their own disposal, freed from the necessity of manual labour, subject to no man's authority, and engaged in the most delightful occupations, obtain, as a class, the greatest sum of human enjoyment. For the happiness, therefore, as well as the ornament of our nature, it is peculiarly desirable that a class of this description should form as large a proportion of each community as possible.' So even James Mill saw visions, and here what a prescient vision! For he foresaw the welfare state, in which we are all to be comfortably middle-class. There is, further, no doubt that on its personal side Mill was the driving power of the whole movement. The tributes of George Grote[11] and of his own son, and his letters with Ricardo leave no doubt about this. Through him the Scottish tradition flows through the veins of the whole Utilitarian movement.

For the son, on the merely factual side, the case is less obviously strong. His mother was English, though she had little, if any, influence on his intellectual life. He lived in England through his formative and most active years. But was it England? Could anyone live under the direct guidance of James Mill without living rather intensely in Scotland? The famous, in some respects infamous, education was his father, and it is just a supreme example or excess of a peculiarly Scottish propensity. It formed Mill through and through. It produced a mind of unique power, speed and range. Reading over his major works—and one has to do this to sense his special power, for it is extensive rather than intensive—one cannot miss the recognition that this is a weapon specially forged, made possible only by the conscious persistence of its maker. Evidence of a type which others may find inconclusive is the simple fact that, in these two, any knowledgeable

[11] G. Grote, *Minor Works*, p. 284.

Scot will recognise his brothers ; not in capacity, but rather in their fanaticisms and weak spots. Especially Scottish is their consuming desire to teach everyone they meet. If one were asked to find outstanding examples of this fanaticism, few could stand beside them. Perhaps the Ancient Mariner could. With that goes the typical elimination of the humorous point of view which is so generally accepted in the south as Scottish. The teaching Scot, like the ravening wolf, is too busy to be humorous. If his mind had been disengaged he could no doubt have seen the joke, perhaps as quickly as a Frenchman or a missionary. But he is not interested in the joke. He has to get his message across. It is not argued that this is necessarily a proper attitude. It is merely insisted that it is a Scots attitude, and that the Mills illustrate it pre-eminently. Then again, Mill's ' inconsistencies ' are even more famous than Smith's and they arise out of the same method for the same reasons. There are other questions that arise with John Stuart Mill, especially perhaps in regard to his wife's responsibility for the social aspects of his writing, but these we must ignore. They do not alter the broad conclusion as to Mill's responsibility for the socialogical emphasis throughout the *Principles*, and especially in the theory of distribution. Yet this is entirely what one would expect of one brought up by his father, who was in turn nourished by the Scots method and interests.

This brings us to about 1870, or indeed later, if we include Marshall. Marshall is the equivocal figure. If the Mills are typically Scots, Marshall is the proper English contrast. The *Principles* of Marshall is in the shape and spirit of the *Principles* of Mill, as Marshall delighted to insist. One wonders at times if he does not protest too much. Certainly the tone and wide sympathies, especially of Books III and VI, are in the tradition, but the footnotes and Books IV and V introduce the modern monographic, abstractly analytic method. The history passes down to the Appendices. Some gremlins have slipped into the cupboards and cellars of the venerable building. As we know, the footnotes and the appendices have grown to separate commands. They have sunk the ' three-deckers ', which sail the seas of realistic speculation no more. Perhaps it was Jevons who launched the decisive attack, for he began the long line of modern positive scientific monographs, but the contributions of Marshall towards their ultimate victory are as subtle and deep as was Marshall himself.[12]

[12] This paragraph may seem to suggest that Marshall would have sympathised with the predominance of analytics and the specialised monograph. I believe this is the opposite of the truth. Marshall was essentially a perfectionist, seeking to reform the institutions and members of the *society* he knew, and wished us all to know. If so, he was nearer the early classics than the economic theorists of today.

However this may be, the fact which stands out for us is clear. The specific Scots tradition ceases to dominate about the middle of the century (sharing rule with Ricardo). There are no great, or even highly placed, Scottish writers in economic theory after Mill, and after Marshall the tradition that Scots thinkers did so much to form, the eclectic, comparative, widely sociological tradition, has faded out. What is still very much alive is the analytic method, the technique of static equilibrium which finds its source, or a main source, in Book I of the *Wealth of Nations*. But this is no longer specifically Scottish. It is absorbed into the stream of world thought as truly as is the central theory of Darwinian evolution. In its modern, dominantly Marshallian perfection it has captured the Universities. All academic economists have spent their lives teaching it as the core of their subject. And the Universities today control the spirit of social theory far more exclusively than in the eighteenth or even the nineteenth century. Only Smith of our greater Scots economists was an academic, and he was so much more. This (perhaps temporary) eclipse of the Scottish method is then the last fact we must, rather dismally, record.

## III

We turn from fact to fiction—here admittedly a distinction of degree. The effect of Smith's genius on the course of the Scottish tradition is a difficult speculation. Yet one cannot ignore it, for it was also Smith's genius which started the modern analytic method on its conquering course. Anyone who studies any pre-Smith Scottish economist (Sir James Steuart, say), then Ricardo, the Mills and Marshall in sequence, will acept this. Here then is the novel individual force that Smith himself contributed. But in his use of history and of broad sociological facts and comparisons to develop his argument and to demonstrate the need for considering all the influences together as seen in actual institutions—in this Smith was not original, he was simply Scottish. His aim was the Scottish, not the modern aim. If here also he shows genius, as he did, it lies in the richness, the apt relevance of his illustrations. It is a mistake here merely to lament the past. The old sociological thinkers of the Scottish school had weaknesses and gaps that to us are glaring. Especially, their view of what can pass as a fact fully deserved Dugald Stewart's inspired description, ' conjectural history '. With their equipment, based as it was on little more than travellers' tales, facts could hardly be more than conjecture. If the older method is ever to revive in economics, we must realise that the task will be much more difficult than it was in

the eighteenth century. Then one mind could reasonably absorb all the writings on the social sciences, as a glance through Adam Smith's library will show. Today this is impossible. We are all so specialised that when we stray from our own disciplines the sense that we may be talking weak superficialities is an inadequacy that we must accept and face. May it not be mere arrogance for any of us to expect to survey all the knowledge? Or has the delusion of Faust in reality captured our spirits? A due humility seems to require that we take the risk of these recognised inadequacies. The eighteenth century thinkers were not accustomed to speak with the assured dogmatism of our modern analysts. As we are, with our present one-line specialisms, we run the risk that nowhere will a balanced picture of the whole social adventure, or even sections of it, be drawn. Yet this should always be the crown of our endeavour. Are our trained thinkers then to leave this valuation to journalists and politicians, for it will inevitably be made by someone? It is neither fair nor right that they should be alone in making it. And it seems immensely dangerous to allow them to be alone.

It should not be laid to Smith's account that Benthamite Utilitarianism became the basis of orthodox economic thought. The opposite is the truth, on the ethical side; Smith there went much deeper than Utilitarianism. It is in fact just an accident of history—one of the many which underline the inadequacy of mechanistic interpretations—that the method of static equilibrium originated in his Book I. The central assumptions of Benthamite Utilitarianism are themselves antithetic to the whole spirit of the Scottish social school. The main philosophic contrast is between a mechanistic psychology, which inevitably eliminates any truly moral theory, and the optimistic forward-looking assumptions of the Scottish school; or again it is seen in the fact that the Scots saw the central fact as a *growing* society, a creature quite different from any mere individual, whereas to Bentham any society was merely an aggregate of individuals. This broad contrast is of central importance for modern economics simply because Marshall accepted as the basis of his positive economic theory the mechanistic 'ethical' or psychological assumptions of Bentham.[13] The static equilibrium theory of 'normal' value is therefore itself inevitably mechanistic. It traces the run down, after disturbance, to a position of stable equilibrium. It has great heuristic value. But its practical inadequacy stands out; it is not equipped to deal with changes *away* from equilibrium. Yet these changes seem to dominate our economic fates.

[13] *Principles*, p. 17n.

In this context a historical speculation will perhaps be allowed. Suppose Benthamism had not captured the dynastic succession. Is it possible that then the spirit and outlook of Lauderdale and Rae might have gained command? We can at least imagine it. They were both critics of Smith, inevitably though admiringly, but they were both completely in the Scots manner and method. It is, however, the line of their criticism that is significant. They thought Smith's theory should give more weight to the importance of invention, novelty, new arrangements in history. Smith, of course, did much here, but to Lauderdale and Rae it is picked on as the core of economic growth, and this is suggested as the central issue in theory and practice.[14] One cannot say this of the *Wealth of Nations*. If their interpretation had developed, it would have had to do so through the Scottish type of procedure, by comparative and historical excursions. The analytic equilibrium theory in fact misses change. It cannot cope with the individual causes of change, just because it is analytical. This means that the method deals with laws and characters that are common to different economic situations. But change and innovation cannot be dealt with by such a method, simply because an innovation, an economic novelty or change away from equilibrium, is by definition a fact. It is therefore in the major sense unique, not common. If it is thus unique as history, it must then be dealt with, it can only be dealt with finally, by methods which are proper to the particular, to qualities as well as quantities. Such methods as the historical, the philosophical or the sociological, are in their turn complementary. The Bentham-Marshall analysis has given us keen cutting power where regularities can be traced, and this is invaluable, but the older method has faltered or been absorbed in the sands of specialisation. Yet the strong basis for its use, as Lauderdale and Rae saw it, still remains. Enterprise is its most positive pole. It is the individual improving or creative element that finds some place in *every* worker in his degree. This is the drive behind economic growth. There are ample sources for this, as for most lines of theory, in the *Wealth of Nations*. Had it grown, it is possible to imagine the type of theory that Schumpeter has so richly developed in our day, working in broadening circles through the whole

[14] For emphasis on the vital importance of what we can summarise as 'know-how', and the suggestion that Smith did not give it sufficient weight, see Lauderdale, *Inquiry into the Nature and Origin of Public Wealth*, pp. 159-161, 176-7, 184-5, where Smith is criticised for missing the special productivity of capital, its own productivity as distinct from that of labour; *cf.* also p. 287. For Rae this productivity of capital is the central theme. It inspires the whole of his remarkable *Sociological Theory of Capital*. Mill with his usual wisdom quoted fully from the outstanding passage (Mill's *Principles*, pp. 165-172), but Rae's theme just is that economic progress depends on enterprise, so in turn on the existence of those social conditions which call it forth. Chapters IX, X and XIV are especially relevant.

range of economic experience over the last two centuries. If this had happened, our economic theory would certainly be a better balanced, a more realistic, more practical equipment than it is today. We might also be nearer control of our main economic evil, the problem of unpredictable growth or decay, inevitably away from economic equilibrium.

## IV

If we try to account for the decline in the Scottish influence, we become even more speculative, and because, apart from its influence on the future (on which this article will end), the subject is of no special practical importance, only brief comment is attempted. We should perhaps first remember that the very brilliance of our eighteenth century throws our judgment out of balance. One would not expect the splendour of classical Athens from its modern representatives. The power of the Scottish influence on European thought is indeed surprising as coming from such a small and then rather remote people. That they realised their position is often evident in their remarks. It is taken for granted quite naturally in this letter from David Hume to Gilbert Elliot (1757): 'Is it not strange,' he writes, 'that at a time when we have lost our Princes, our Parliaments, our independent Governments, even the presence of our chief nobility, are unhappy in our Accent or Pronunciation, speak a very corrupt Dialect of the tongue, which we make use of : is it not strange, I say, that in these circumstances, we should really be the people most distinguished for Literature in Europe?' It is the strangeness, not the fact that excites his wonder. The fact was accepted, and Hume was certainly no boaster, and was in a position to judge. To ask why it happened is as hopeless of answer as questions about any broad movement of history.

On the more practical side, the cradle being mainly in Glasgow, there is real occasion for research into the economic setting there over the century, for it showed a vigorous outburst of energy, and opportunities made and taken, such as would stimulate and direct wider social enquiries. The eighteenth century rapidity at least must be rather unique. Later, Glasgow slowed down to the tempo and form of British industrial development in general. But the answers we can offer to 'Why the decline in Scots economists?' are at best negative. The one positive factor we have noted is that an antithetic movement of thought captured the leadership of social thinking, and Scotsmen, like Welshmen, or even Irishmen, have been absorbed into it. We in the Scottish Universities have done our due and proper part in teaching economic theory in the Bentham-Marshall tradition to a rich flow of

students. The present article may at times have seemed critical of that tradition, but this is not intended. Any fair estimate must recognise the invaluable services to accuracy of definition, objective consistency and cutting edge that the more positive methods have built and sustained. When we remember the vague guesses of previous speculation we must insist that these disciplines of the experimental and scientific methods are at least an essential stage in the longer journey of knowledge. But are we sufficiently satisfied with their results to regard them as more than a stage, tool-making rather than directly ore-bearing?

However that may be, there is little doubt that Scotsmen, while acquiescent, have not been entirely comfortable and luxuriant in modern economic theorising, and it may well be that men so placed do not tend to excel there. The Scottish mood remains critical. The trend has been to teach the orthodox line, but to do one's special work rather in historical, social or semi-philosophical research. The two obvious Scots rebels should at least be mentioned—Ruskin and Carlyle. That their crusade was largely emotional is not in itself to its discredit. But here we deal with scientific thought, so we need only remark that their protests were typical of the Scottish tradition in that they were broadly social and moralistic. A more closely reasoned academic reaction is to be found in one who taught Marshall's system all his academic life yet came in the end to feel it was not enough. William Smart's *Second Thoughts of an Economist* puts the equilibrium theory of distribution entirely fairly (on the lines of his book on Distribution). He quietly insists that if you are teaching mere economics, you must in logic and common sense distribute according to 'economic worth'. Where he reacts, as he reflects on his work towards its close, is in the conviction that economic theory should itself be based on assumptions which are at once more realistic and more moralistic than those accepted in Marshall's footnote (on page 17). He agrees that the static equilibrium theory of prices follows logically from the assumption that a rising standard of living is a sufficient aim for economic science—but only, he correctly points out, if we think of the standard of living in merely quantitative terms. If exact logic is maintained, Benthamite assumptions can lead only to such conclusions. (Strict logic is not in fact maintained.) Yet, to this experienced business man who later turned to teaching and economic history, it was clear that the quantitative measure was incapable of dealing with the real emotions and forces which inspire business and working men. If pushed to the application we wish to reach, it gives false results. We wish, for workmen also, the economics of free enterprise in a growing society rather than what we have been given, the

economics of free competition in a static society. This is the Scottish reaction still at work.

It is difficult to give a kenspeckle link in the tradition between Smart and John Stuart Mill, simply because there are then no kenspeckle Scots economists. In Glasgow the man who bridged these years was Edward Caird. He taught some economic theory in his Moral Philosophy course, but in the only set of notes available (made by a student in his class) the economic theory is slight;[15] it is typically illustrated from classical and Stoic sources, interlaced into their moral theories. He certainly regarded it as part of his duty, though a small part, to teach Political Economy, but when he felt the subject growing beyond his energy he gladly passed it on (in 1887) to William Smart. The following passage,[16] which concludes a public lecture by Caird, shows, however, how conscious he was of the wider social forms in economic life, and how typically Scots was his reaction to them: 'I do not think it will be possible henceforth to separate political economy from the general study of politics, or to discuss the laws of the production and distribution of wealth apart from the consideration of the relation of the distribution of wealth and the modes of distributing it to the other elements of social well-being. The abstraction of science will always be necessary for thorough knowledge of economy, as of everything else; but when we isolate part of *human* existence, it is more important than in relation to any other subject to remember that we *are* abstracting—*i.e.* that we are dealing with fragments of a whole, of which no final account can be given by anatomy. The practical value of the social science of the future will depend not only on the way in which we break up the complete problem of our existence into manageable parts, but as much and even more upon the way in which we are able to gather the elements together again, and to see how they act and react upon each other in the living movement of the social body.'

One might well ask, where has the Scots energy gone, if it has lacked the highest achievement in economics? Some questions merely raise others. After all, the abilities of a people can be spread over all its interests. To academic minds, Theology, Philosophy, the Law, Science, Medicine have always opened wide doors, and there the generations of Scottish scholars have found at once satisfaction and distinction. But more specifically, one may expect a people to follow its aptitudes. If so, Scots interested in sociological or normative processes would not find these very directly in modern analytical

[15] There may be further sets of his notes in private hands. If so they would be welcomed by the Library of his University, if legible.

[16] Edward Caird, *The Moral Aspect of the Economic Problem* (1888).

economics. Here it may be fair to note the numbers of distinguished Scots in the history of social anthropology. In the eighteenth century they shared almost an oligopoly with the French, but later we have Maine, J. F. McLennan, W. Robertson Smith and Frazer. Closer to home and today, we note W. R. Scott, Sir Alexander Gray and Professor Hamilton in their contributions to economic history. And, in general, anyone who knows the Scots universities from the inside realises that the most natural approach of Scotsmen is either philosophical or historical, or severely applied in the sense that it confines itself to interpretation based on scientifically established fact. So it is with the students also. No one who has taught Scots students can miss the special response when the philosophic aspect is raised. We cannot explain such tastes. It is just ' the nature of the beast '.

Finally, as to the future, will it be likely to offer new opportunities to Scotsmen to follow their bent? If it does, we may expect a more positive Scottish contribution. Whether Scots today maintain the qualities so impressive in their scholarly past is endlessly debatable because the limits of the argument cannot be fixed. Their interest in the speculative and in the normative type of knowledge is certainly as intense. It appears that the influence of the Church is not dominant as it certainly was in the eighteenth century. It was the Presbyterian structure that then most closely expressed the familial relations of the relatively small society which led the country.[17] This may have diminished, but mainly in form. If one were to add the intellectual impacts of the Church, the Universities, the Law, Medicine, the more scientific side of business, the Scots are certainly as intellectually inclined today as ever they have been. Then again, one might point to some watering of the warm family emotion which formed our earlier loyalties and institutions. Certainly the power of the larger kinship group has passed. But we remain a small tightly knit nation, keenly interested in each other as persons living together. That this still lives is expressed in our poetry, essentially a folk, a family literature. The talented editors of *A Scots Anthology* (stretching from the thirteenth to the twentieth century) remark: 'The main body of Scottish poetry is not in this heroic vein but springs from the normal day to day life of the people, a people who, until the end of the eighteenth century, lived wholly in the country or in small towns where you had only to go down a wynd off the main street to reach the country. It was, too, a remarkably homogeneous people. Rich and poor lived pretty close together and the gap between the great folk and the common folk was not an unbridgeable gap ; divisions between

[17] Cf. Mackie, *The University of Glasgow*, pp. 186, 212.

the classes did not obscure their common humanity. And so we find that a court poet like Dunbar could leave the lofty, artificial, allegoric strain and be not only familiar, but vulgar ; that some of the best of our songs of peasant life and feeling are by writers of the landed and professional classes; that Scott—Sheriff of Selkirk, Laird of Abbotsford, and Baronet—could write of the life and feelings of common folk with an understanding and reverence equalled only by Wordsworth ; and that, in our own time, *Fisher Jamie*—that delightful serio-comic elegy on a Tweedside poacher—was composed by a highly cultured Scot who ended his life as Governor-General of Canada and Chancellor of the University of Edinburgh.' If one reads through these five hundred or so pages of living emotion, the continuing sense of personal individual life in a free community is manifest. We may still then feel assured that whether or not we are the size of our fathers, we remain the same kind.

The future, however, will open to us only if we give it what it wants. Are there any signs that there may be a renewed need for the Scottish approach in the social sciences? Here we can only consult our broad impressions. Are we satisfied that the methods of analytic economics are sufficient or indeed alone suitable as the theoretical approach to the economic issues now typical in industry? In the nineteenth century the practical effort was specialised as never before. It appeared reasonable to treat by a linear science what was then practised as a rather linear way of life in private business. Even within their own minds, it was customary for business men to keep somewhat separate the standards of business from their more speculative ethical and religious ideals, and a simple code of the economic man could have sufficient appearance of practical relevance, as well as afford a firm intellectual basis. Between them social biology, Freud, the joint-stock company, modern nationalism and wars, the inevitable state direction they foster, have altered the slant of our thought about man in society. The importance of groups as the setting of the individual, perhaps the central awareness of the eighteenth century in Scotland, this awareness is today again dominant ; dominant in fact, and therefore to be dealt with by scientists; dominant in the kind of problem which practice proposes to thought, as in all the mixed issues of welfare and defence which make up the traffic of our political life. In this new world, the effort to see the different aspects together in their proper relations again becomes at least as important as the exact definition and analysis of each aspect. The two traditional methods, the analytic and the synoptic, are then seen to be complementary, mutually supporting and nourishing each other. We may

well have to be patient with sociology. Its difficulties are immense. But if there is a future for sociological economics and politics—and if there is not we shall have to make it—then there is an opportunity for the resurgence of the Scottish tradition and the Scottish genius. May the opportunity make the men!

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# A NEW INDEX OF RESIDENTIAL CONSTRUCTION AND LONG CYCLES IN HOUSE-BUILDING IN GREAT BRITAIN, 1838-1950

## I

### Introduction

One of the more important gaps in the statistics of the nineteenth century and first quarter of the twentieth relates to house-building. Apart from the statistics of one or two towns, and the figures obtainable from the Inhabited House Duty, there is no annual information bearing directly on the subject throughout the whole of the Victorian period.[1] The House Duty figures, moreover, cannot be used for years before 1874, and from 1874 to 1913 they suffer from a number of defects which render their reliability problematical. From 1785 to 1849 we have Shannon's brick index[2] but it is affected by railway construction and represents the whole of the building industry, not house-building alone. As non-residential building forms a large proportion of the total and as the various sectors of the industry do not necessarily follow the same trend or the same fluctuation, Shannon's index cannot be taken as a reliable indicator of house-building, even though it may be a better guide to the movement of all building output combined. The 1850s and 1860s are a specially obscure period and there is no adequate link between 1914 and 1924, the year from which more comprehensive statistics become available. The only statistics available for this period are the returns of building plans passed by a number of urban districts and published from 1910 in the *Labour Gazette*. They are given in value terms and, as the period was subject to violent fluctuations in prices, are especially dependent on an accurate index of building costs for deflation into terms of volume.

The deficiency in house-building statistics is fortunately, however, not as great as the absence of published materials would appear to suggest. A good deal of information on building activity was originally collected by Local Authorities and some of it, at any rate, has in

[1] For 1901-16 we have, however, a very useful series giving the number of houses erected in the forty largest municipal areas in England and Wales. The source is a pamphlet entitled *The National Conference on Housing after the War : Report of the Organising Committee* (Manchester 1917). The figures have been reproduced by Professor A. K. Cairncross in *Home and Foreign Investment, 1870-1913*, (1953), p. 155.

[2] H. A. Shannon, ' Bricks—A Trade Index, 1785-1849 ', *Economica* (N.S.), Vol. I, No. 3, August 1934, pp. 300-18.

some form or other survived the salvage campaigns of two World Wars.

The primary purpose of this paper is to present a new index of house-building activity which has been compiled from precisely such local data. The earliest information relates to Liverpool and goes back to 1838, but statistics of a number of towns become available from the 1850s and by 1900 the index is based on thirty-four towns. In 1924 it can be chained to an index based on the comprehensive national data.

There are at least two distinct types of fluctuation which have from time to time bedevilled the course of house-building activity: a relatively short movement lasting approximately five to seven years, and a movement of considerably longer duration and wider amplitude. The former includes some random fluctuations but is on the whole best regarded as a manifestation of the business cycle. It is a fluctuation which is at times almost completely submerged by the long cycles, and on occasion it emerges only in variations in the rate of movement. Even so, this fluctuation, and its relationship to the trade cycle, is far from being without interest, and it has indeed aroused a good deal of controversy. It is, however, a subject which merits treatment on a more extensive scale than can be allowed in this article.

Our interest here is in the long fluctuations. These were noted as early as 1908 by Dearle,[3] and Beveridge described the 'hyper-cyclical fluctuations of the building trade'[4] in 1921. But in spite of this early 'discovery', and in spite of the intrinsic interest of the subject to the student of economic fluctuation and growth, it has not received a great deal of attention in Great Britain. There is, in fact, no comprehensive study of the long 'building cycle'[5] relating to this country.[6] This is

[3] N. B. Dearle, *Problems of Unemployment in the London Building Trades*, (London, 1908).

[4] Lord Beveridge, 'Some Aspects of Trade Fluctuation', *Transactions of the Manchester Statistical Society*, Session 1920-21.

[5] The term 'cycle' is employed in this paper without its usual connotation implying a periodically recurrent fluctuation.

[6] The main works on the subject are: Professor A. K. Cairncross, 'The Glasgow Building Industry (1870-1914)', *Review of Economic Studies*, Vol. II, No. 1, October 1934, pp. 1-17, and '*Home and Foreign Investment, 1870-1913*', (1953), Ch. 2 and elsewhere; and H. W. Robinson, *The Economics of Building* (1939), Chs. 7 and 8. There have also been some articles by Dr. M. Bowley and Professor I. Bowen but they are concerned mainly with cyclical fluctuations in 1924-38. M. Bowley, 'Fluctuations in House-building and the Trade Cycle', *Review of Economic Studies*, Vol. IV, No. 3, June 1937, pp. 167-81; M. Bowley, 'Some Regional Aspects of the Building Boom, 1924-36', *Review of Economic Studies*, Vol. V, No. 3, June 1938, pp. 172-186; I. Bowen, 'Building Output and the Trade Cycle (U.K. 1924-38)', *Oxford Economic Papers*, No. 3, February 1940, pp. 110-30. More work has been done on long building cycles in the U.S.A. and the literature has been reviewed by C. E. V. Leser in 'Building Activity and Housing Demand', *Yorks. Bull. of Econ. and Social Research*, Vol. III, No. 2, July 1951, pp. 131-49.

a task which cannot be undertaken here and no attempt will be made to advance any 'interpretation' of the phenomenon. Our task is the less ambitious one of description and statistical definition of the major fluctuations.

## II

### The Statistics of House-building

Before presenting the new index it is desirable to survey briefly the main alternative source materials on house-building before 1914. These may be summarised under three heads :

(i) Income Tax (Schedule A) and Inhabited House Duty statistics.

(ii) Materials from the Population Census.

(iii) Approved building plans or houses erected in individual towns.

Only the last of these are reliable indices of residential construction, but the only series published are those of the plans passed by the Dean of Guild Court of Glasgow from 1863, the number of new houses in the London Metropolitan Police District from 1871, and the number of houses erected in the forty largest municipal areas in 1901-16.[7] Except for the latter the coverage is too limited for the figures to serve as indications of national building activity. However, it is from this kind of information that our index for larger areas has been constructed and the series for Glasgow and London have been incorporated into the new index.

From the Inhabited House Duty it is possible to obtain statistics of the annual increases in the housing stock from 1874-5 to 1913-4.[8] These have generally been made use of for the study of house-building fluctuations but they suffer from a number of defects which detract considerably from their value.

The figures are *net* quantities and a good deal of new house-building which is offset by demolitions or conversions is lost in the totals. If this magnitude could be established, or if it could be assumed that it formed a fairly constant proportion of the total

[7] A. K. Cairncross, *Home and Foreign Investment, 1870-1913*, pp. 16, 155; J. C. Spensley, 'Urban Housing Problems,' *Journal of the Royal Statistical Society*, Vol. LXXXI, Part II, March 1918, p. 210. A series of a different kind, based on fees received by Building Surveyors in London for inspecting new buildings under the provisions of the London Building Acts, is given by E. W. Cooney, 'Capital Exports, and Investment in Building in Britain and the U.S.A., 1856-1914', *Economica* (N.S.), Vol. XVI, November 1949, pp. 347-54.

[8] The data are given in Lord Stamp, *British Incomes and Property, 1916*, p. 141. Similar figures, but relating only to houses with an annual value of £20 and over, are available from 1851-2. The proportion of the latter to all dwelling-houses in 1874-5 was, however, only 12·7 per cent. Stamp has also an extensive general discussion of Inhabited House Duty statistics.

housing stock or of new house-building, this difficulty could be overcome. Unfortunately, there is very little information on demolitions, etc. and what estimates there are indicate considerable variations over time which are not ostensibly related to fluctuations in new building or the stock of houses.

There is the further difficulty of the re-assessment years: every three years in England and Wales before 1888-9, then every five years (except in 1910-1, when the interval was seven years), and every five years in the Metropolis.[9] In these years increases in rent were given effect to while reductions were allowed for annually. This introduced a downward bias into the figures of annual value in inter-assessment years, while the numerous appeals which followed new assessments and often led to subsequent revision introduced an opposite bias in years of assessment. This difficulty does not affect the similar statistics given for the *number* of houses, but these (no less than the value figures) were affected by the continuous transfers and re-transfers of buildings between different categories.

The House Duty statistics may therefore be used as a measure of the *net* change in the annual number of *all* premises, but they must be treated with the greatest caution when used as an index for house-building activity.

The Census of Population gives the number of inhabited and uninhabited houses on dates on which the Census was taken from 1801, and the number of houses in course of erection from 1811. From these data it is possible to obtain the *net* increases in the housing stock over decennial periods. The Census information is somewhat impaired by changes in the definition of a house, and it is likely that the enumeration of uninhabited houses was incomplete. The statistics give, however, a valuable—if rough—indication of building movements over a long historical period and they have a major advantage in being available for local areas. The numbers of houses in course of erection provide a useful check on other data in Census years.

## III

### The New Index

Statistics of building plans came into existence in connection with the responsibilities of Local Authorities for enforcing the local building by-laws. Builders wishing to erect houses were required to submit

[9] In Scotland the system of valuation amounted in effect to annual re-assessments.

building plans for approval to the City Surveyor or Engineer who sanctioned the plans if they conformed with the requirements of the by-laws. Often the officer responsible also kept a check on the number of houses actually erected, and for some towns these statistics alone have been preserved. Whenever available these are the more accurate indicators, but usually they do not extend as far back as the building plans.

There are a number of shortcomings in these statistics which must be briefly noted. First, there is the problem of urban boundary changes. As towns enlarged their administrative areas, the building series applied correspondingly to larger districts and some discontinuities were inevitably introduced. No adjustment was possible, but in most cases the volume of building in the added area must have been small in relation to building in the town as a whole. Inspection of the building series in years in which some of the larger extensions occurred indicates, moreover, no obvious discontinuities. It is therefore reasonable to assume that comparability is not, on that count, seriously impaired.[10]

The definition of a 'house' may have changed from time to time and there may have been variations in definition between different Local Authorities. Prior to 1914 these changes were probably of a minor character. The prevailing tendency in England and Wales before 1914 appears to have been to follow the Census of Population and to define a 'house' as 'all the space within the external and party walls of a building', and in the Census for England and Wales this definition was adhered to throughout the period from 1851 to 1911. From 1921 the Census housing returns were based on a unit described by the term 'structurally separate dwelling'. It was defined in the 1931 Census as 'any room or suite of rooms intended or used for habitation having separate access to the street or to a common landing or staircase' (*Housing Report and Tables*).[11] This change in definition may have some effect on the comparability of the post-1918 figures with pre-war ones. Inasmuch as a given housing stock would include a larger number of housing units under the 1921 definition than it would under the definition prevailing before the war, it is likely to exaggerate the level of house-building in the inter-war period in relation to earlier years.

[10] C. D. Long, who examined the effect of more than fifty boundary extensions in more than a dozen American cities found no evidence that the uniformity of building permit data was seriously affected by boundary changes (C. D. Long, Jr., *Building Cycles and the Theory of Investment*, 1940, p. 97).

[11] A similar definition applied to Scotland from 1881, but for 1851-71 the definition was the same as that used in England and Wales up to and including 1911.

Other shortcomings adhere more specifically to 'plan' statistics. There is a time-lag before plans materialise into actual houses, and some plans are never executed as builders subsequently decide not to build. Impending changes in building by-laws—tending towards tighter regulations—led at times to a rush to take out a large number of plans in the hope that they might be executed under the more liberal old regulations, and many of these plans were never implemented. In other cases plans were allowed to lapse, only to be renewed at a later stage. A time limit was generally set, sometimes as short as one year, during which actual building operations had to begin, or the approved plans would expire and have to be filed again if the building was to go up. For a number of reasons therefore, building plan statistics exaggerate the amount of actual building and a statistical adjustment to allow for this tendency is required.

In order to render comparable the data relating to houses actually erected and the data of plans it has been assumed that it took six months to build a house and that plans approved in a given year were implemented in the year ending six months later. It was further assumed that 10 per cent. of the annual building plans failed to be executed, this percentage being an estimate formed from inspection of the statistics of plans and completed houses for a few towns for which both are available over a period of years. Finally, all series given in financial years were converted to calendar years.

It was possible to assemble series of statistics for thirty-four towns, twenty-six of these being in the form of 'houses erected' and the remainder relating to the number of houses on approved building plans. Before 1900 the sample gradually decreases to six in 1856 and for the period from 1838 to 1855 use is made only of a series for Liverpool. The problem of combining an increasing number of series up to 1900 into a general index was solved by varying appropriately the number of towns included in the base period (1900 - 09). Thus the houses built in the towns included in, say, 1856 were added up and the sums were expressed as relatives of the average number of houses erected in the same towns in the base period. As further towns were added, the average for 1900 - 09 was correspondingly raised by the average amount of building in the added towns. In this way house-building in any given year was compared with house-building in the same area in the base years. Even so, however, the narrowing coverage before 1900 cannot but impair the accuracy of the index for earlier years.

London presented a special problem. Building activity in the capital has at times diverged considerably from that elsewhere and when London is included in the general index by the method described

it tends, on account of its size, to dominate the index. The difficulty was overcome by first constructing an index based on thirty-three towns, excluding London, and estimating on the basis of this index the actual number of houses erected in Great Britain apart from London. The base for the number of houses built was the official statistics of all houses erected in Great Britain in 1924-37 less the houses built in London.[12] The number of houses erected in the capital was then added on and the result was converted to an index based on 1900 - 09 = 100. In this way London was given its appropriate weight in the general index.

The index is based on urban areas only but, for reasons given in Section VI, it is possible to make it broadly representative of the movement of total national house-building output by a correction applied to the index in the period 1891 - 1913. As for the urban areas, all towns with a population of more than 200,000 in 1911 are included, as well as a number of small and medium towns. Most of the major geographical areas, such as Lancashire, Yorkshire, Scotland, Wales, the Midlands and the South, are in some way represented, although some are under-represented while others are perhaps overweighted. This is an unavoidable shortcoming since the towns included were determined by the existence of data and not by some statistical formula. If additional series can be secured—and a good deal may still be unearthed from old Local Authority reports and files—the index will be revised and rendered more completely representative of the country as a whole.

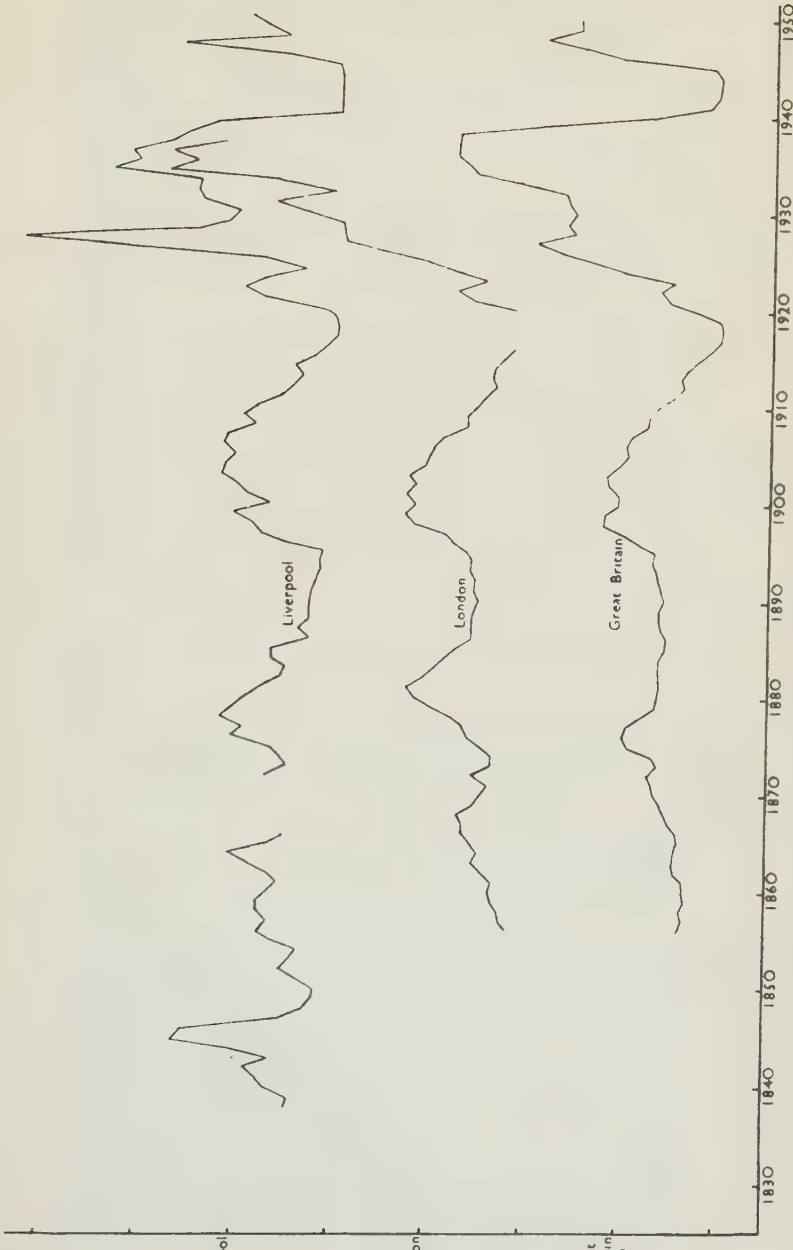
Although the final index is not based on the total volume of house-building undertaken, and in spite of the defects discussed, it may nonetheless be taken as a broadly reliable indicator of residential building fluctuations in Great Britain. If not all-inclusive, it does reflect house-building activity in a substantial sector of the economy and the defects attached to the data prove in practice to be more apparent than real.

## IV

### The Course of House-building

Three final indices are set out in the Appendix and shown in Fig. 1. There is an index for Liverpool from 1838, an index for London from 1856, and an index for the thirty-four towns from the

[12] 1937 is the last year in the pre-war period for which the statistics of London are available.




House-building in Liverpool, London and Great Britain, 1838 - 1950.
(1900 - 9 = 100. Each vertical division = 100 points.)

FIG. 1

same year.[13] The latter is chained in 1924-8 with an index of the total number of houses erected in Great Britain. It is continued to 1950, in order to include the trough in house-building occasioned by the war, and it can easily be brought up to date. For some purposes it is useful to know also the actual number of houses built as distinct from indices, and for Great Britain these too are given in the Appendix.

The index of thirty-four towns exhibits some minor fluctuations in the 1850s and 1860s, the most important of which appears to have been the fluctuation with its peak centred on 1863. The trend is almost horizontal for the first ten years or so of the index, but rises sharply from the trough of the minor cycle in 1865-6. There is a minor peak in 1872, followed by a trough in 1873 and then by a sharp rise to the peak of the first long cycle in 1876. From 1877 to 1879 house-building slumps heavily. Thereafter building remains in the doldrums for some sixteen years, but there are some minor ups and downs and there is a gentle upward trend from the trough year 1886. In the mid-1890s the index rises sharply to a major double peak in 1898 and 1903. After 1903 the downswing sets in. Activity falls almost persistently in the next decade, with only slight reversals in 1906 and 1913, to a level lower than at any time since the 1850s and early 1860s. The outbreak of war in 1914 further accentuates the building slump and reduces house-building to almost nil by 1918.

The upswing of a third building cycle is located in the inter-war period There is a minor peak in 1922 and a trough in 1923. This is followed by a much greater boom centred on 1927, a break with a trough in 1930, and a final all-time peak in 1936. This movement is finally reversed by the Second World War, when house-building came to a standstill.

The turning-points of the major fluctuations in Great Britain, as well as the turning-points in London and Liverpool, are given in Table I.

The general outline of the fluctuations is the same for London as for the thirty-four towns but there are some divergences in timing and amplitude and there is a further cycle—though not on a par with any of the subsequent fluctuations—with a peak in 1868. In contrast to the general index, house-building in London increased in the later 1850s, the early 1860s and up to the boom of 1868. There followed a downward movement to 1871 when the index of thirty-four towns shows a rise. There is a minor peak in London in 1872 and in the next four years the two indices move in agreement. They diverge again after 1876, when house-building was beginning to slump in the general

[13] The index will for convenience be referred to as the ' index of thirty-four towns ' in spite of its narrowing coverage before 1900.

index while still mounting to its major peak in London in 1881. Between 1881 and 1886 house-building slumped in London too. Elsewhere it remained stable, though depressed. There followed a period of some fifty years in which the movement of the indices is in broad agreement, except that London barely suffered from the depression in the late 1920s and early 1930s and benefited rather more from the housing boom of the later 1930s. The turning-point in London appears, moreover, to have occurred in 1934 rather than, as in the general index, in 1936.

TABLE I

TURNING POINTS OF MAJOR HOUSE-BUILDING FLUCTUATIONS IN GREAT BRITAIN, LONDON AND LIVERPOOL, 1838 - 1950

| GREAT BRITAIN | | LONDON | | LIVERPOOL | |
|---|---|---|---|---|---|
| *Peaks* | *Troughs* | *Peaks* | *Troughs* | *Peaks* | *Troughs* |
| ..... | ..... | ..... | ..... | 1845 | 1850 |
| ..... | ..... | 1868 | 1873 | 1864 | 1873 |
| 1876 | 1886 | 1881 | 1890 | 1878 | 1895 |
| 1898 | 1918 | 1899 | app. 1918 | 1903 | 1918 |
| 1936 | 1944 | 1934 | ..... | 1927 | 1942 |

The index for Liverpool indicates two further major cycles with peaks centred on 1845 and 1864 respectively. House-building rose from 1839, suffered a reverse in 1843, and continued upwards to the high peak in 1845. In that year 3,728 houses were erected, compared with 927 in 1839. Another 3,460 houses went up in 1846. In the following five years house-building slumped heavily and in the trough year 1850 no more than 420 houses were erected in the city. Recovery thereafter proceeded along a trend rising firmly to 1856 and more gradually to the peak in 1864. Minor peaks occurred in 1852, 1856 and 1859 and minor troughs in 1854, 1857 and 1861. There was a sharp fall in activity in 1865 and 1866 and a trough is clearly indicated some time in the late 1860s or early 1870s. Unfortunately, it cannot be accurately located, as the figures for 1867-71 are missing. From 1873 there is a renewed rise to the major peak in 1878. This is followed by seventeen years in which, apart from a minor recovery in 1885 and a slighter movement still in 1887, house-building went from bad to worse and

finally reached rock-bottom in 1895. Only 247 houses were completed in that year. The pattern of house-building activity in the 1880s and early 1890s diverges therefore from that of most other towns in that it follows a downward trend and reaches its trough rather later than elsewhere. The upswing from 1895 to 1899 was both steeper and shorter than in most other towns. The temporary reversal in 1900 and the second peak of the cycle are clearly marked, but there is a further divergence from the more general experience after 1903, when building in Liverpool remained high for some years longer while house-building elsewhere declined. After the minor peak in 1906 Liverpool too suffered depression, although there were slight reversals in activity in 1909 and 1914. In the inter-war period cyclical peaks are shown in 1922, 1927 and 1934, and troughs in 1924 and 1930. The highest level of activity was reached in the boom year 1927, almost ten years before the peak in the various available national indices.

The fluctuation in Liverpool in the 1840s is of special interest, partly because it is the only available statistical evidence bearing directly on house-building in this period and partly because it suggests a further long cycle comparable to those with peaks in 1864, 1878 and 1903. It is, however, doubtful to what extent the movement in Liverpool may be taken as representative for the country as a whole. It is true that Shannon's figures for England and Wales show an output of bricks in 1840-9 greater than in the corresponding years in the 1830s by 3·1 billions or nearly 25 per cent. But there are no comparable figures for the 1850s and it is not clear how much of the output of bricks in the 1840s was absorbed by the rapidly increasing railway construction and by other non-residential uses.

There were also at least two special local forces operating in Liverpool to stimulate house-building that existed elsewhere only to a much lesser degree (in one case) or not at all (in the other). The first was the impetus given to housing demand by large-scale Irish immigration into the city; the other was the agitation for, and final implementation of, the first Building By-Law in 1846. Faced with the prospect of being tied by building regulations, the Liverpool speculative builders anticipated the By-Law and rushed to provide as many dwellings of the old type as possible in the period immediately preceding its introduction.[14]

Perhaps the best test is to take the Census net increases in housing stock in England and Wales in 1841-51 and the adjoining decades and compare them with house-building in the city. The result indicates a

[14] Royal Commission on the Housing of the Working-Classes, Vol. II, 13339. C.4402, 1885.

level of house-building in the 1840s considerably below both the 1830s and the 1850s.

TABLE II

NET INCREASES IN HOUSING STOCK IN ENGLAND AND WALES, 1831 - 61

| *1831 - 41* | *1841 - 51* | *1851 - 61* |
|---|---|---|
| 515,733 | 314,341 | 492,666 |

Some allowance must be made for the greater volume of demolition which accompanied railway construction in the 1840s ; and the Census estimates of the increase in housing stock may be subject to considerable error since, prior to 1851, the interpretation of the term ' house ' was left to the discretion of the enumerator. Even so, it is difficult to see how the volume of house-building in the 1840s could have approached the level of the 1830s or 1850s.

When one comes to look at the other individual town indices, the most striking fact to emerge is the general participation of all towns in the rhythm of the long cycles, although there were very considerable variations in amplitude and timing and although not every town participated in each cycle.

The cycle in the 1860s, the peak of which is strongly evident in Liverpool in 1864 and in London in 1868, and which emerges also mildly in the index of thirty-four towns in 1863, is the only important exception to general conformity. It appears to have been a fluctuation of more local than national incidence, although it was not confined to any specific geographical area. There is no similar movement in Birmingham and Newport (Mon.) although both towns underwent a minor fluctuation. Glasgow suffered a serious depression in the middle of the 1860s and Bradford in the early 1860s. Recovery in both towns was rapid from 1865-6 and in Glasgow activity increased steadily up to the building-cycle peak in 1876. In Bradford a very high level of activity was reached by 1867 and continued on that plane throughout most of the 1870s but there was no boom in the 1860s distinct from that entered upon in the next decade. Finally, the level of house-building in Hull rose steadily from about 1855 ; there is no indication of a major peak in the 1860s although in this town also there was a minor boom in 1867. The movement there is more in the nature of a long secular rise to the peak of the building cycle in 1875.

Practically all towns for which statistics are available shared in the building boom of the 1870s. The only exceptions are one or two of the smaller towns. Thus, neither Exeter nor Newport (Mon.) were much affected, but it cannot be said that the fluctuations were confined

mainly to the larger industrial towns. Swindon, Gloucester and Burton-upon-Trent are cases in point which participated fully in the upswing of the 1870s. Burton, in fact, enjoyed at that time the greatest boom of its statistically recorded history of house-building.

The downswing that followed and lasted in most towns up to the early- to mid-1880s is equally evident in most areas, although Hull was relatively little affected and activity in Cardiff and Newcastle rose sharply from 1882—the first year for which statistics for these towns are available—to a peak in 1884 and 1888 respectively.

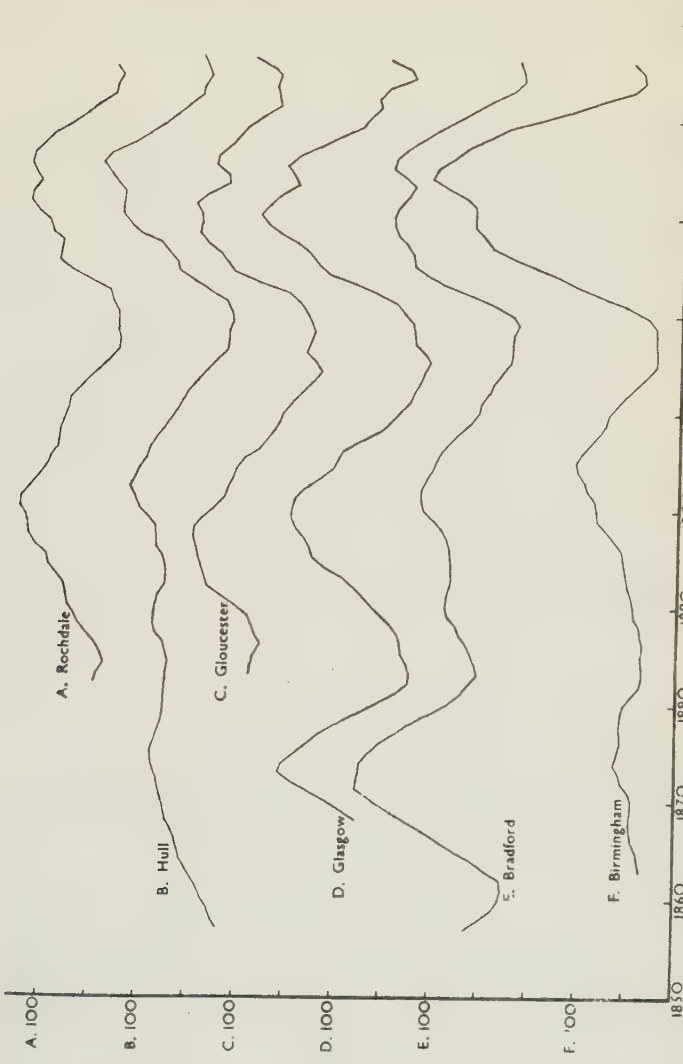
The minor boom shown by the aggregate index in 1889 appears to have reached, in some towns, amplitudes as great or greater than were attained in the peaks of the major building cycles in the 1870s or around the turn of the century. Thus Newcastle enjoyed a sharp boom in 1888, Exeter followed in 1889, Burnley in 1890 and Swindon in 1891. Doncaster had a similar boom in 1893. Bradford, too, enjoyed in 1890 a boom only a little below the peak in 1903. Many other towns, however, experienced only a minor fluctuation at the time and the wider fluctuations are best regarded as rather violent aberrations of a general minor movement rather than as an additional cycle to those described.

Except for Coventry and Macclesfield, all towns participated in the major boom around 1900. In Coventry, house-building rose from 1895 to 1898, as in the other towns, but the really important advance did not come until 1905-08 and the actual peak is located in 1911. House-building activity in Coventry exhibits therefore a rhythm opposite to that of the other towns in that it rises to boom conditions at a time when activity elsewhere drops into an acute depression. Macclesfield follows a similar course. The double peak in 1899 (possibly 1898) and 1903, though very mild, is shown by the figures, but the trend throughout 1893-1913 is gently but consistently upwards and the highest point is reached in 1911.

Other exceptions to the depression in building so widely felt in the period immediately preceding the First World War were the towns of Stockport and Burnley in Lancashire, Wakefield in Yorkshire and Gourock in Scotland. All these towns register a major peak between 1897 and 1901, followed by depression and rapid recovery, with a rising trend until the outbreak of war. In Wakefield and Gourock the peak in 1911 is considerably higher than the long cycle peak around 1900.

Finally, all towns took part in the upswing in the inter-war period and the downturn brought about by the Second World War. It is interesting to note, however, that quite a number of towns (*e.g.*

Manchester, Derby, Glasgow, Bradford and Liverpool) reached their peak of activity as early as 1926-9, almost ten years earlier than the peak in the national index.[15]




House-building in some towns in Great Britain, 1853 - 1950. (1900 - 9 = 100. 9-year moving averages. Each division = 50 points.)

FIG. 2

A selection of house-building indices for individual towns are graphed in Figure 2. In order to reduce the effect of minor fluctuations and to emphasise the long cycles, they are given in the form of nine-year moving averages. The actual figures have not been reproduced in

[15] This is very largely due to Corporation building.

the Appendix as it is hoped to publish the material in full in due course.

## V

### Amplitude of Long Cycles

One of the most spectacular and well-known features of residential building cycles is the severity of their fluctuations. In his examination of 104 American industries A. F. Burns found only thirteen with trend-cycle amplitudes[16] higher than those evident in building. Three of these were building materials such as cement and asphalt, and the remainder included a variety of industries such as beet-sugar, raisins, sulphur, vessels, aluminium, cigarettes and locomotives—none of which is an industry of comparable magnitude to the building industry.

Changes in the amplitude of fluctuation of residential construction over time are no less interesting than comparisons with other industries and some indication of the broad movement can be derived from the data on hand. The measures of amplitude used for that purpose were obtained by adding, for each cycle, the rise from the initial trough to the peak and the subsequent fall from the peak to the terminal trough. In order to make comparable the severity of cycles of different length, the sums were divided by the duration of the cycles. As we are not concerned with minor fluctuations it is desirable to eliminate or reduce the influence of the latter and this has been done by smoothing the index with nine-year moving averages. The method described yields a measure of what may be termed *absolute* amplitude. A further measure of *relative* amplitude was calculated by adjusting for the level of house-building which prevailed during each cycle. The measures of amplitude are set out in Table III.

The results suggest a rather wider amplitude (absolute and relative) for the cycle centred on 1902 than for the preceding one and a much wider amplitude for the fluctuation centred on the inter-war period. The absolute amplitude of the last cycle rises much more sharply than the relative amplitude and this can be attributed to the higher level of building activity and to the impact of the two wars. The wars provide also a partial explanation for the sharp increase in the relative amplitude of the cycle with a peak in 1935, and the First World War helps to account for the wider amplitude of the second cycle centred

[16] A. F. Burns, *Production Trends in the U.S. since 1870*, (National Bureau of Economic Research, 1934), pp. 230-3. Burns' 'trend-cycles' are deviations of the decade rates of series from exponential curve trends. Standard deviations are used as a measure of amplitude.

on 1902. Not the whole of the increase in amplitude in 1887-1919 can, however, be attributed to the First World War. If the absolute amplitude of the second cycle was measured over a period excluding the war years (1887-1910) it would still amount to 3·8—or approximately 80 per cent. above the amplitude of the cycle centred on 1874.

TABLE III

AMPLITUDE OF LONG BUILDING FLUCTUATIONS IN GREAT BRITAIN, 1856 - 1950[a]

| (1) *Long cycles trough to trough* | (2) *Sum of rises and falls* | (3) *Duration of cycles years* | (4) *Absolute amplitude* | (5) *Relative amplitude* |
|---|---|---|---|---|
| 1860 - 1875 - 1887 | 58 | 27 | 2·1 | 3·3 |
| 1887 - 1902 - 1919 | 141 | 32 | 4·4 | 5·8 |
| 1919 - 1935 - 1944 | 372 | 25 | 14·9 | 10·6 |

[a] Based on 9-year moving averages of index of thirty-four towns (Great Britain after 1923).

## VI

### RURAL HOUSE-BUILDING

The discussion so far has been concerned entirely with residential construction in towns. It is equally instructive to survey the course of house-building in the countryside and to determine in particular whether the long cycles described occur there also or whether they are entirely an urban phenomenon.

Annual statistics of rural house-building are unfortunately not available but some idea of the progress of house-building can be obtained from the net increase in rural housing stock between one Census and the next. This can be estimated by extracting from the Census the number of houses in all Registration Districts (or Sub-Districts) which are predominantly rural. The boundaries of the Registration Districts do not, of course, conform to any precise rural-urban division, but they can be so grouped as to approximate roughly to the two sectors. For the purpose in hand, all Registration Districts other than those including a town with a population of 20,000 or more

in 1891 were defined as rural. The resulting estimates include therefore houses not only in entirely rural areas but also in small towns. On the other hand, some houses in the rural fringes of large towns are excluded. But the picture of long run changes that emerges is on that count probably little affected.[17]

A further difficulty is that the boundaries of Registration Districts were changed from time to time. Fortunately, there were relatively few large changes. Some of these do not affect our calculations since it is with the housing stock in the total of rural areas that we are concerned and changes in boundaries between rural districts alone do not affect the totals. In the few cases when there were large changes in the boundaries between rural and urban areas, the necessary adjustments to ensure comparability could be carried out. Smaller changes

TABLE IV

NET INCREASES IN RURAL, URBAN AND TOTAL HOUSING STOCK IN ENGLAND AND WALES, 1841 - 1911[a]

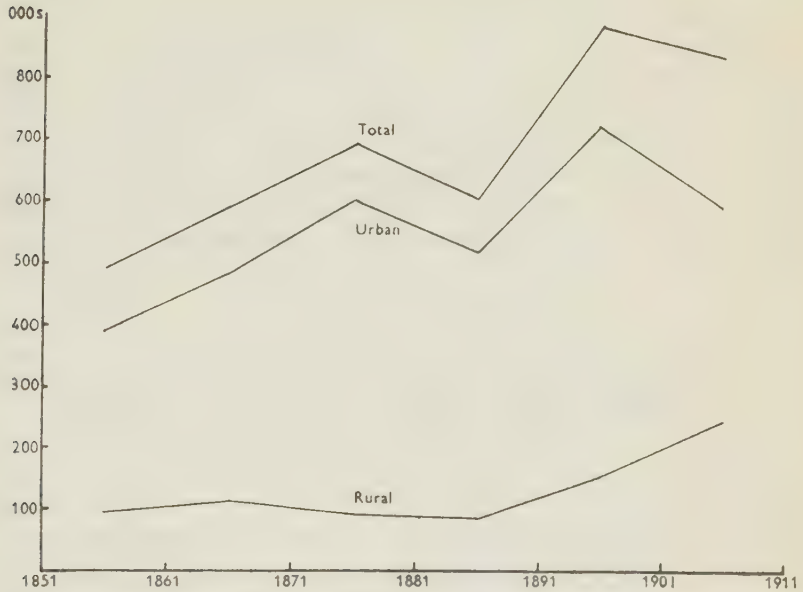
| | (1) *Total (000's)* | (2) *Rural (000's)* | (3) *Urban (000's)* |
|---|---|---|---|
| 1841 - 51 | 315 | 81 | 234 |
| 1851 - 61 | 492 | 98 | 394 |
| 1861 - 71 | 596 | 113 | 483 |
| 1871 - 81 | 698 | 93 | 605 |
| 1881 - 91 | 606 | 85 | 521 |
| 1891 - 1901 | 886 | 157 | 729 |
| 1901 - 11 | 840 | 241 | 599 |

[a] The Scottish figures are excluded because of a change in the definition of a house in 1881 which makes comparability with previous years impossible (*Scottish Census Report 1881*, Vol. I, p. X).

[17] The rural sector of the country is more accurately defined by the Rural Sanitary Districts (later Rural Districts), first used in the 1881 Census, but they are of no use for our purposes since the housing stock cannot be estimated for these areas beyond 1901. Their population coverage in 1891 amounted to 9,502,000 compared with 11,203,000 in the grouping of Rural Registration Districts used here.

in boundaries were more plentiful but their effect is hardly important enough to upset the general conclusions drawn from the figures.[18]

The increases in the number of rural houses together with the corresponding urban figures—obtained by simple subtraction of the rural estimates from the totals—are set out in Table IV and Figure 3.




Net increases in rural, urban and total housing stock in Census decades in England and Wales, 1851 - 1911.

FIG. 3

Rural house-building appears to have described a slight upswing from the 1840s to 1871 and a downward movement in the next twenty years, to a level almost the same as that of the 1840s. There was a more pronounced rise in the 1890s and 1900s. The striking characteristic to emerge, therefore, is the absence of major fluctuations in parallel with the long cycles in the urban and national indices.

Figure 3 illustrates also the close conformity of movement between the national and urban increases in housing stock. The latter provided by far the greater proportion of the national total and the long fluctuations were characteristic of this sector alone, so that it dominated

[18] A check on the effect of these minor boundary changes has been obtained as follows. The Census provides information on houses for each Registration District in the current and preceding Census date within current boundaries. A comparison of the number of houses within current boundaries and within the boundaries ten years hence provides a measure of the error introduced into comparability. The sum of the divergences was in each decade less than 1 per cent.

the course of total house-building. In 1841 - 91, when there is almost no trend in the rural sector, the two series were almost parallel. In 1891 - 1901 the rise in the urban index is somewhat milder and in 1901 - 11 the fall is sharper. The effect of rural building in this period was therefore to raise the trend of national house-building and an adjustment to our index is required if it is to serve as an indicator for the country as a whole.

An adjustment was carried out on the basis of an index expressing the ratio of the decennial increases in total housing stock to the increases in urban houses. The index was based on 1881 - 91 = 100 and the deviations from 100 measure the extent to which the movement of the national increases in housing stock diverges from the urban figures. Except in 1901 - 11 the deviations are slight throughout the period for which a comparison with our house-building index is required.

TABLE V

RATIO OF THE TOTAL INCREASES IN HOUSING STOCK TO THE INCREASES IN URBAN DISTRICTS IN ENGLAND AND WALES, 1851 - 1911

1881 - 91 = 100

| 1851 - 61 | 1861 - 71 | 1871 - 81 | 1881 - 91 | 1891 - 1901 | 1901 - 11 |
|---|---|---|---|---|---|
| 107 | 106 | 99 | 100 | 105 | 121 |

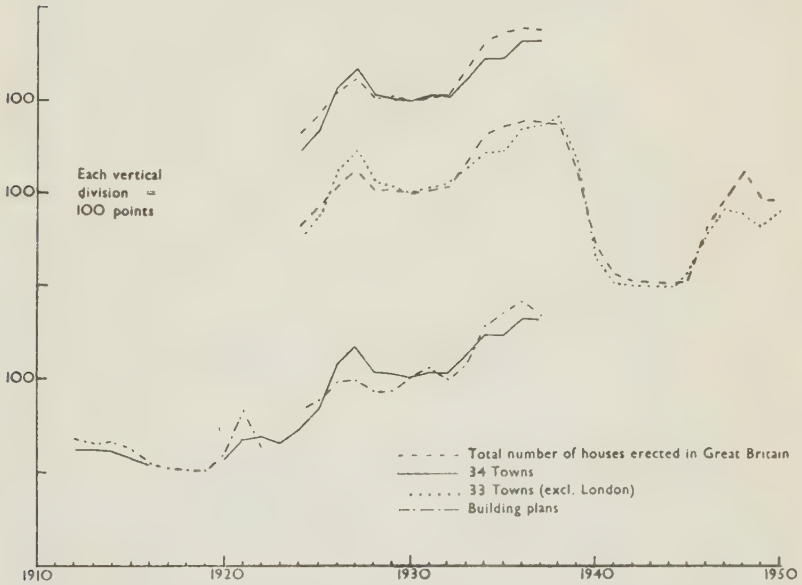
To eliminate the divergence in trend in 1891 - 1911 it was assumed that the differential between the increases in total and urban houses grew at a linear rate, and the index of thirty-four towns was consequently raised in each year by a percentage starting with $^1/_2$ in 1892 and rising by $^1/_2$ to 5 in 1901, and then rising annually by $1^1/_2$ per cent. to 20 per cent. in 1911. It was further assumed that the trend continued to 1913, in which year the index was raised by 23 per cent. and then chained to the uncorrected index.[19]

[19] An element of error may still be retained in the corrected index on account of the impossibility of making any allowance for possible changes in demolitions and conversions of houses into and from other uses.

## VII

### Comparisons with Alternative Indices

The index of thirty-four towns can be compared, for part of the period covered, with a number of indices based on other data, and this has been done as fully as possible to obtain some measure of its reliability. All statistics used in the comparisons are set out in the Appendix.




Indices of house-building in Great Britain, 1912 - 50. (1930=100.)

Fig. 4

For the first comparison the index of thirty-four towns has been continued to 1937 and in Figure 4 it is set out alongside the index calculated from the statistics of all houses erected in Great Britain in 1924 - 37. Agreement is very close throughout and the only discrepancy worth noting is the rather lower level of activity indicated by the thirty-four towns in 1935. A longer comparison with the official statistics of house-building can be carried out only with thirty-three towns, excluding London. This has been done for the period 1924 - 50 (Fig. 4). The movements of both indices conform very closely except for the same divergence in 1935 and again in 1948 - 50. The only important discrepancy in turning-points occurs in the late 1930s, with the index of thirty-three towns indicating a peak in 1938 as

against 1936 in the comprehensive data. This divergence between turning-points can be attributed to the exclusion of London where building activity in the 1930s pursued a different course.

The link with pre-1914 years can be tested by comparison with an index calculated from the estimated cost of dwelling-houses on approved building plans (Fig. 4).[20] These figures are available for eighty towns in 1911 - 30 (but not 1922) and for 146 towns in 1923 - 38. They have been lagged by one year to allow for the time that elapses between the passing of building plans and the completion of houses.[21] The figures were then deflated by an index of building costs and chained together in 1924 - 6. The movement of both indices is broadly similar but divergences arise in 1921 - 2, 1926 - 9 and 1935 - 6. In 1921 the plan statistics show a sharp boom which has no corresponding movement in the thirty-four towns. On the other hand, the thirty-four towns indicate a slight peak in the following year, while building plans have reversed into a severe depression. The reliability of plan statistics as an indicator of actual building activity in these years is, however, extremely doubtful.[22] In 1926 - 9 the building plans indicate a lower level of building activity than the thirty-four towns but the latter appear to be the more accurate when compared with the total number of houses erected. On the other hand, the lack of agreement in 1935 - 6 confirms the impression that the thirty-four towns understate the volume of activity in those years.

A further comparison between a pre-1914 year and a post-war year is possible by making use of the Census of Production and Inland Revenue Assessments. Using these sources, Colin Clark estimated the value of new dwellings in 1907 at £35m. and in 1924 at £72m.[23] When deflated by an index of building costs[24] the figures suggest a level of house-building in 1907 slightly higher than in 1924. In contrast, our index indicates a level of house-building in 1907 lower by approximately 8 per cent. The divergence, as it stands, is not excessively

[20] The statistics of building plans cover Greater London but not the London County Council area ; the statistics for London used in this paper, however, relate to Greater London, *inclusive* of the L.C.C. area.

[21] A one-year lag appears more appropriate in this period than a shorter lag, as the turning-points then coincide with the turn in all houses erected in Great Britain.

[22] It is for this reason that the information was not published for 1922 (1923 if lagged). It was held officially that ' the rapid changes in the costs of building and of the considerable number of plans approved upon which work was not proceeding ' considerably reduced the value of these statistics as an indicator of building operations. *Ministry of Labour Gazette* (March 1923), p. 85.

[23] C. Clark, *Investment in Fixed Capital in Great Britain*, (Memorandum No. 49, Royal Economic Society and London and Cambridge Economic Service, October 1934), p. 6.

[24] K. Maiwald, 'An Index of Building Costs in the U.K., 1845 - 1938', *Economic History Review* (2nd Series), Vol. VII, No. 2 (December 1954), p. 192.

great, but there are some grounds for believing that Colin Clark's estimate for 1907 is too high. Cairncross has a similar estimate for that year of £28 ± 2 m.[25] In real terms, and expressed as a relative of Clark's 1924 estimate,[26] this figure diverges from our index by approximately the same amount as Colin Clark's, but it indicates a level of house-building in 1907 *below* our index. If one, however, takes £30 - 2 m., a figure which is well supported by some of the checks made by Cairncross[27] and approximates to the mean of the Cairncross and Clark estimates, agreement with our index is most satisfactory.

The comparisons are set out in Table VI.

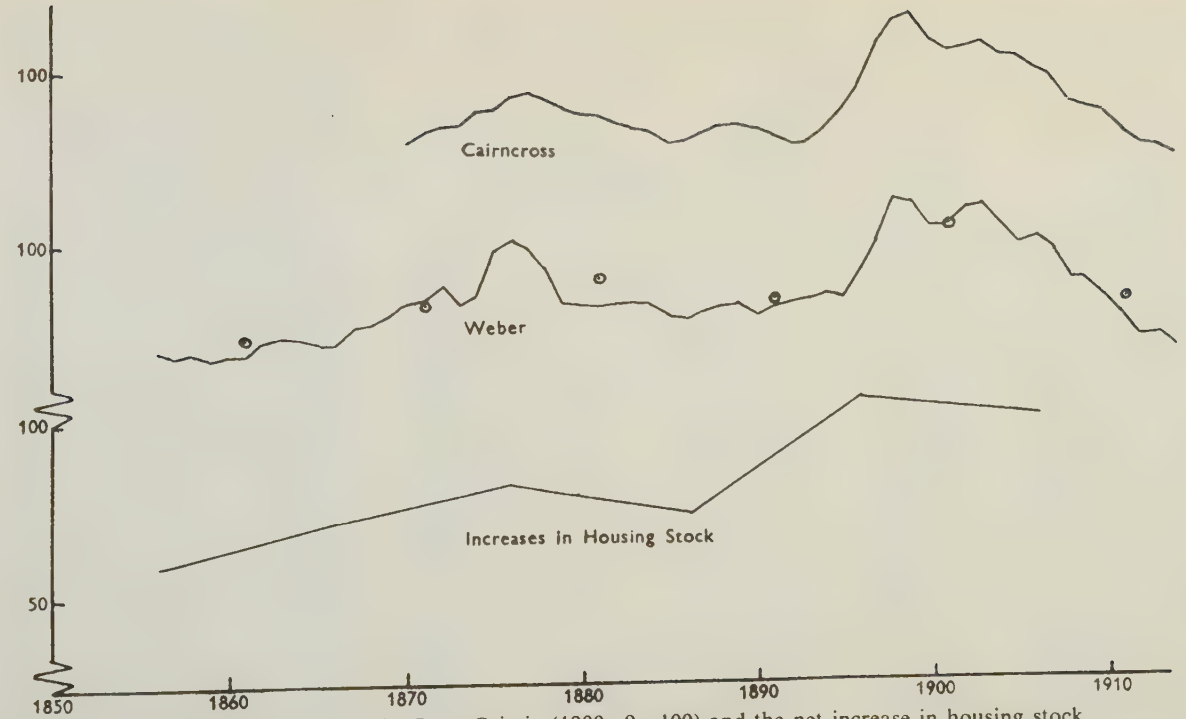
TABLE VI

HOUSE-BUILDING IN 1907 AND 1924

| | *1907* | *1924* |
|---|---|---|
| 1. C. Clark. Value of new dwellings. Current £m. . | 35 | 72 |
| 2. A. K. Cairncross. Value of new dwellings. Current £m. | 28 | ..... |
| 3. Index of building costs. 1930 = 100 . . . | 53·0 | 110·9 |
| 4. C. Clark (1) in 1930 prices. (1) ÷ (3) £m. . . | 66·0 | 64·9 |
| 5. C. Clark (4) with 1924 = 100 . . . . . | 101·7 | 100·0 |
| 6. B. Weber. Index of house-building. 1924 = 100 . | 92·4 | 100·0 |
| 7. A. K. Cairncross (2) deflated by index of building costs (3) and expressed as a percentage of C. Clark's estimate for 1924 (4) | 81·4 | ..... |

For years before 1914 house-building in the thirty-four towns can be compared with Cairncross's estimates of the number of houses erected annually in Great Britain in 1870 - 1914.[28] For 1901 - 14 these estimates are based on the number of houses erected in Greater London and in the forty largest municipal areas in England and Wales (plus an allowance for Scotland), and for 1870 - 1900 on the Inhabited House Duty statistics supplemented by Census and other miscellaneous data.

[25] Cairncross, *op. cit.*, p. 109.
[26] There is no reason to query C. Clark's figure for 1924. The 1924 Census of Production is easier to work with and the same figure is arrived at also by I. Bowen (*op. cit.*, p. 118).
[27] Cairncross, *op. cit.*, p. 108 - 9.
[28] *Ibid.*, p. 157.




Indices of house-building in Great Britain (1900 - 9 = 100) and the net increase in housing stock in England and Wales (1901 - 11 = 100), 1851 - 1914.
⊙ = Houses being built at Census dates in England and Wales (1901 = 107).
(Each vertical division = 100 points except for increase in housing stock.)

FIG. 5

The House Duty statistics were made use of only in revaluation years and the year-to-year changes were smoothed in accord with other evidence on hand.

The major fluctuation in the 1870s and around 1900 emerges clearly In both series and there are only minor divergences in turning-points. Cairncross sets his turning-points in 1877, 1885 and 1899 as against ours in 1876, 1886 and 1898. The amplitude of the boom in the 1870s is milder in Cairncross's series and there is no fluctuation whatsoever in 1870 - 7. In contrast the town indices suggest a depression, varying in severity from place to place, in or before 1873. Further divergences arise in the minor boom in 1889, which is less pronounced in the thirty-four towns, and in 1903, when the second peak of the boom is only mildly evident in the Cairncross index. Its near disappearance may be the result of the link in 1901 of the House Duty statistics with the other material. The House Duty figures themselves point to a rather stronger upward movement at the time.[29]

TABLE VII

NET INCREASES IN HOUSING STOCK AND NUMBER OF HOUSES IN COURSE OF ERECTION ON CENSUS DAY IN ENGLAND AND WALES, 1851 - 1911

| | (1) *Net increases in housing stock* | (2) *Col. (1) 1901 - 11 = 100* | (3) *Houses in course of erection on Census day at end of period* | (4) *Col. (3) 1901 = 107·0* |
|---|---|---|---|---|
| 1851 - 61 | 492,666 | 58·6 | 27,305 | 47·2 |
| 1861 - 71 | 596,263 | 70·9 | 37,803 | 65·3 |
| 1871 - 81 | 697,733 | 80·9 | 46,414 | 80·2 |
| 1881 - 91 | 605,486 | 72·0 | 38,387 | 66·3 |
| 1891 - 1901 | 886,103 | 105·4 | 61,909 | 107·0 |
| 1901 - 11 | 840,649 | 100·0 | 38,178 | 66·0 |

The materials in the Census of Population enable us to make two further comparisons. The index of thirty-four towns can be compared with, first, an index based on the number of houses in the course of

[29] Cairncross, *op. cit.*, p. 157.

erection on Census dates; and, second, with the net inter-Census increases in total housing stock. The figures are set out in Table VII and charted in Figure 5. The gradually mounting level of activity in the 1860s and 1870s, the reversal in the 1880s, the renewed upswing in the 1890s, and finally, the downswing after the turn of the century, are all confirmed by the increases in housing stock. Agreement with the number of houses being built, with the possible exception of 1881, is equally satisfactory.

B. WEBER

*Glasgow*

## Statistical Appendix

1. *Index of house-building in thirty-four towns, 1856 - 1923, and in the whole of Great Britain, 1924 - 50. 1900 - 09 = 100.* The following towns are included:

Birkenhead, 1853 - 74 and 1895 - 1923
Birmingham, 1859 - 1923
Bradford, 1853 - 1923
Brighton, 1894 - 1923
Bristol, 1899 - 1923
Burnley, 1887 - 1913 and 1921 - 1923
Burton-on-Trent, 1866 - 1923
Cardiff, 1882 - 1912
Coventry, 1892 - 1923
Crewe, 1876 - 1923
Derby, 1886 - 1923
Doncaster, 1891 - 1923
Exeter, 1868 - 1923
Gateshead, 1900 - 1923
Glasgow, 1864 - 1923
Gloucester, 1879 - 1923
Gourock, 1896 - 1923
Hull, 1853 - 92 and 1895 - 1923
Leeds, 1876 - 1923
Leicester, 1892 - 1923
Liverpool, 1853 - 66 and 1872 - 1923
London, 1856 - 1916 and 1920 - 23
Macclesfield, 1894 - 1923
Manchester, 1891 - 1923
Newcastle, 1881 - 1923
Newport (Mon.), 1855 - 1923
Nottingham, 1882 - 9 and 1896 - 1923
Rochdale, 1878 - 1923
Sheffield, 1887 - 1923
Stockport, 1866 - 1923
Swindon, 1871 - 1923
Sunderland, 1895 - 1923
Wakefield, 1878 - 1923
Wolverhampton, 1861 - 9, 1877 - 84 and 1887 - 1923.

The basic information consists of statistics of the number of houses erected or of the number of houses on approved building plans (for London *see* Col. 3). It was obtained either directly from the City Engineers, Surveyors or Medical Officers of Health of the Local Authorities concerned, or from the published annual reports of these officers. In 1924 - 8 the index is chained with an index based on the total number of houses erected in Great Britain (Col. 2).

The method of construction of the index is described in the text (Section III).

2. *Number (in thousands) of houses erected in Great Britain, 1856 - 1950.*—The figures for 1924 - 50 are from the *Statistical Abstracts for the United Kingdom.* In 1924 - 45 and for Scotland in 1927 - 38 they had to be converted to calendar years. For 1856 - 1923 the method of estimation is described in the text (p. 110).

3. *Index of house-building in London, 1856 - 1916 and 1920 - 37. 1900 - 9 = 100.*—For 1871 - 1916 the series used is the number of new houses in the Metropolitan Police District (J. C. Spensley, 'Urban Housing Problems', *Journal of the Royal Statistical Society,* Vol. LXXXI, Pt. II, March 1918, p. 210). The number of houses erected in 1856 - 1870 is estimated by chaining to the above in 1871 an index based on the annual fees obtained by the

District Surveyors in the Metropolitan Board of Works District of London (London County Council from 1889). The source is : E. W. Cooney, ' Capital Exports and Investment in Building in Britain and the U.S.A., 1856 - 1914 ', *Economica,* N.S., Vol. XVI, No. 64, November 1949, p. 354. For 1920 - 37 : number of houses erected in Greater London (*London Statistics,* 1936 - 38, Vol. XLI, London County Council, 1939, p. 172). There is a slight discrepancy between the coverage of the figures in 1920 - 37 and 1871 - 1916. The latter relate to the Metropolitan Police District, while the former relate to Greater London, which covers the Metropolitan Police District as well as the City Police District. The effect is insignificant as there was very little new house-building in the City of London. The discrepancy in coverage between the series for 1871 - 1916 and 1856 - 1914 is more serious, but a comparison of their movement over 1871 - 1914 shows a high degree of conformity.

4. *Index of house-building in Liverpool, 1838 - 66 and 1872 - 1950. 1900 - 09 = 100.*—Index based on the number of houses erected. The statistics were obtained from *The Builder,* 18 May 1867 (1838 - 66), the *City Building Surveyor's Department* (1872 - 1919 and 1939 - 50) and the *Annual Report of the City Building Surveyor for 1938* (1920 - 38).

5. *Index of house-building in thirty-four towns, 1912 - 16 and 1920 - 37. 1930 = 100.* Method of construction described in text (Section III).

6. *Index of house-building in thirty-three towns (excluding London), 1924 - 50. 1930 = 100.* Method of construction described in text (Section III).

7. *The estimated cost of dwelling-houses on approved building plans in eighty towns in 1912 - 22 and 146 towns in 1924 - 38 at 1930 prices. 1930 = 100.*—The method of construction is described in the text (p. 124). The statistics for 1911 - 23 were taken from the *18th Abstract of Labour Statistics,* Cmd. 2740, 1926, and for 1923 - 38 from Lord Beveridge, *Full Employment in a Free Society,* 1944, p. 291. The index of building costs used for deflation is from K. Maiwald, ' An Index of Building Costs in the U.K., 1845 - 1938 ', *Economic History Review,* 2nd series, Vol. VII, No. 2, December 1954, p. 192.

8. *Estimated number of houses built in Great Britain, 1870 - 1914. 1900 - 09 = 100.*—Based on A. K. Cairncross's estimates in ' *Home and Foreign Investment 1870 - 1913* ', 1953, p. 157.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| 1838 | ... | ... | ... | 46·2 | ... | ... | ... | ... |
| 1839 | ... | ... | ... | 40·7 | ... | ... | ... | ... |
| 1840 | ... | ... | ... | 69·3 | ... | ... | ... | ... |
| 1841 | ... | ... | ... | 77·4 | ... | ... | ... | ... |
| 1842 | ... | ... | ... | 89·1 | ... | ... | ... | ... |
| 1843 | ... | ... | ... | 61·1 | ... | ... | ... | ... |
| 1844 | ... | ... | ... | 107·7 | ... | ... | ... | ... |
| 1845 | ... | ... | ... | 163·9 | ... | ... | ... | ... |
| 1846 | ... | ... | ... | 152·1 | ... | ... | ... | ... |
| 1847 | ... | ... | ... | 53·6 | ... | ... | ... | ... |
| 1848 | ... | ... | ... | 28·8 | ... | ... | ... | ... |
| 1849 | ... | ... | ... | 19·6 | ... | ... | ... | ... |
| 1850 | ... | ... | ... | 18·5 | ... | ... | ... | ... |
| 1851 | ... | ... | ... | 36·8 | ... | ... | ... | ... |
| 1852 | ... | ... | ... | 49·9 | ... | ... | ... | ... |
| 1853 | ... | ... | ... | 40·6 | ... | ... | ... | ... |
| 1854 | ... | ... | ... | 36·4 | ... | ... | ... | ... |
| 1855 | ... | ... | ... | 59·6 | ... | ... | ... | ... |
| 1856 | 40·2 | 52·6 | 18·9 | 74·9 | ... | ... | ... | ... |
| 1857 | 36·4 | 47·5 | 25·7 | 66·8 | ... | ... | ... | ... |
| 1858 | 39·0 | 50·9 | 26·6 | 75·5 | ... | ... | ... | ... |
| 1859 | 34·2 | 44·6 | 31·4 | 77·3 | ... | ... | ... | ... |
| 1860 | 34·6 | 45·2 | 34·6 | 68·1 | ... | ... | ... | ... |
| 1861 | 34·6 | 45·2 | 31·6 | 54·9 | ... | ... | ... | ... |
| 1862 | 44·5 | 58·1 | 42·6 | 66·6 | ... | ... | ... | ... |
| 1863 | 49·3 | 64·4 | 50·9 | 88·6 | ... | ... | ... | ... |
| 1864 | 46·6 | 60·9 | 48·8 | 105·5 | ... | ... | ... | ... |
| 1865 | 41·0 | 53·6 | 55·2 | 65·8 | ... | ... | ... | ... |
| 1866 | 42·3 | 55·2 | 61·6 | 48·3 | ... | ... | ... | ... |
| 1867 | 50·0 | 65·3 | 63·0 | ... | ... | ... | ... | ... |
| 1868 | 53·9 | 70·4 | 70·1 | ... | ... | ... | ... | ... |
| 1869 | 59·0 | 77·0 | 53·9 | ... | ... | ... | ... | ... |
| 1870 | 65·8 | 85·9 | 46·3 | ... | ... | ... | ... | 58·9 |
| 1871 | 69·2 | 90·4 | 40·1 | ... | ... | ... | ... | 62·6 |
| 1872 | 71·9 | 93·8 | 51·6 | 68·5 | ... | ... | ... | 67·9 |
| 1873 | 62·6 | 81·7 | 35·5 | 47·1 | ... | ... | ... | 69·4 |
| 1874 | 69·6 | 90·9 | 35·8 | 55·7 | ... | ... | ... | 74·0 |
| 1875 | 92·2 | 120·3 | 46·2 | 65·7 | ... | ... | ... | 77·7 |
| 1876 | 100·2 | 130·8 | 59·7 | 103·0 | ... | ... | ... | 83·0 |
| 1877 | 95·0 | 124·1 | 66·5 | 93·8 | ... | ... | .. | 84·5 |
| 1878 | 81·6 | 106·5 | 79·0 | 116·8 | ... | ... | ... | 81·5 |
| 1879 | 65·8 | 86·0 | 99·6 | 102·8 | ... | ... | ... | 77·0 |
| 1880 | 63·6 | 83·1 | 115·0 | 92·1 | ... | ... | ... | 73·2 |
| 1881 | 60·6 | 79·1 | 120·7 | 74·6 | ... | ... | ... | 71·7 |
| 1882 | 62·7 | 81·9 | 107·5 | 54·2 | ... | ... | ... | 68·7 |
| 1883 | 62·7 | 81·9 | 97·4 | 49·9 | ... | ... | ... | 65·7 |
| 1884 | 63·1 | 82·4 | 85·0 | 64·2 | ... | ... | ... | 61·9 |
| 1885 | 58·8 | 76·7 | 72·7 | 64·3 | ... | ... | ... | 56·6 |
| 1886 | 57·5 | 75·1 | 56·5 | 25·5 | ... | ... | ... | 58·9 |
| 1887 | 60·3 | 78·7 | 57·6 | 38·1 | ... | ... | ... | 61·1 |
| 1888 | 61·2 | 79·9 | 57·3 | 25·8 | ... | ... | ... | 64·9 |
| 1889 | 60·9 | 79·5 | 54·6 | 26·4 | ... | ... | ... | 68·7 |
| 1890 | 58·1 | 75·8 | 50·4 | 23·9 | ... | ... | ... | 64·2 |
| 1891 | 60·6 | 79·1 | 55·8 | 20·8 | ... | ... | ... | 60·4 |
| 1892 | 64·3 | 84·0 | 51·7 | 19·4 | ... | ... | ... | 57·4 |
| 1893 | 65·8 | 85·9 | 59·2 | 14·6 | ... | ... | ... | 58·9 |
| 1894 | 69·8 | 91·2 | 59·4 | 16·6 | ... | ... | ... | 62·6 |
| 1895 | 68·8 | 89·8 | 60·6 | 10·9 | ... | ... | ... | 73·2 |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| 1896 | 82·0 | 107·1 | 77·9 | 52·7 | ... | ... | ... | 89·8 |
| 1897 | 99·8 | 130·4 | 85·5 | 78·5 | ... | ... | ... | 111·7 |
| 1898 | 120·8 | 157·7 | 114·6 | 86·9 | ... | ... | ... | 127·5 |
| 1899 | 119·6 | 156·2 | 126·3 | 103·7 | ... | ... | ... | 129·8 |
| 1900 | 107·0 | 139·7 | 116·0 | 69·1 | ... | ... | ... | 114·7 |
| 1901 | 107·0 | 139·7 | 125·3 | 94·3 | ... | ... | ... | 109·4 |
| 1902 | 117·8 | 153·8 | 117·5 | 101·0 | ... | ... | ... | 110·2 |
| 1903 | 120·2 | 156·9 | 121·9 | 117·0 | ... | ... | ... | 111·7 |
| 1904 | 104·6 | 136·6 | 107·3 | 112·3 | ... | ... | ... | 104·2 |
| 1905 | 97·6 | 127·4 | 101·3 | 102·2 | ... | ... | ... | 104·2 |
| 1906 | 100·1 | 130·6 | 98·8 | 116·4 | ... | ... | ... | 98·1 |
| 1907 | 92·9 | 121·3 | 88·6 | 109·8 | ... | ... | ... | 91·3 |
| 1908 | 77·3 | 100·9 | 61·7 | 81·3 | ... | ... | ... | 79·3 |
| 1909 | 75·7 | 98·8 | 61·5 | 96·6 | ... | ... | ... | 77·0 |
| 1910 | 65·9 | 86·0 | 54·2 | 80·2 | ... | ... | ... | 70·9 |
| 1911 | 51·7 | 67·5 | 46·2 | 59·0 | ... | ... | ... | 60·4 |
| 1912 | 40·9 | 53·4 | 36·9 | 48·4 | 24·5 | ... | 37·1 | 52·8 |
| 1913 | 41·5 | 54·2 | 39·6 | 36·7 | 24·8 | ... | 29·7 | 52·1 |
| 1914 | 37·0 | 48·3 | 38·3 | 40·1 | 22·1 | ... | 31·5 | 49·1 |
| 1915 | 23·6 | 30·8 | 25·6 | 21·9 | 14·1 | ... | 26·4 | ... |
| 1916 | 13·0 | 17·0 | 16·8 | 11·3 | 7·8 | ... | 9·5 | ... |
| 1917 | 4·1 | ... | ... | 1·0 | ... | ... | 2·7 | .. |
| 1918 | 2·2 | ... | ... | ... | ... | ... | 0·9 | ... |
| 1919 | 4·3 | ... | ... | 0·5 | ... | ... | 0·6 | ... |
| 1920 | 22·7 | 29·7 | 12·2 | 12·1 | 13·6 | ... | 15·4 | ... |
| 1921 | 58·3 | 76·1 | 59·6 | 78·9 | 34·9 | ... | 62·8 | ... |
| 1922 | 64·7 | 84·5 | 78·0 | 98·6 | 38·7 | ... | 29·4 | ... |
| 1923 | 50·6 | 66·1 | 47·4 | 75·1 | 30·3 | ... | ... | ... |
| 1924 | 100·5 | 131·2 | 80·4 | 32·0 | 46·7 | 50·2 | 64·7 | ... |
| 1925 | 133·4 | 174·2 | 108·3 | 72·4 | 69·4 | 76·1 | 76·6 | ... |
| 1926 | 170·3 | 222·3 | 154·6 | 212·7 | 111·5 | 124·9 | 95·1 | ... |
| 1927 | 195·2 | 254·9 | 192·8 | 320·7 | 131·7 | 146·1 | 98·6 | ... |
| 1928 | 158·3 | 206·8 | 195·5 | 143·5 | 105·9 | 112·2 | 88·6 | ... |
| 1929 | 162·5 | 212·2 | 196·9 | 113·5 | 103·4 | 108·8 | 88·7 | ... |
| 1930 | 155·0 | 202·4 | 231·5 | 103·7 | 100·0 | 100·0 | 100·0 | ... |
| 1931 | 160·8 | 210·0 | 256·0 | 139·9 | 106·1 | 104·7 | 109·8 | ... |
| 1932 | 167·0 | 218·1 | 205·8 | 147·3 | 105·0 | 109·7 | 99·7 | ... |
| 1933 | 210·8 | 275·2 | 250·9 | 143·9 | 124·8 | 129·7 | 117·7 | ... |
| 1934 | 257·8 | 336·7 | 371·8 | 234·4 | 146·7 | 142·6 | 156·1 | ... |
| 1935 | 268·4 | 350·5 | 349·0 | 205·1 | 149·3 | 148·9 | 170·9 | ... |
| 1936 | 279·5 | 365·0 | 363·6 | 215·1 | 167·8 | 171·0 | 185·4 | ... |
| 1937 | 277·4 | 362·2 | 318·7 | 170·5 | 165·2 | 173·4 | 168·9 | ... |
| 1938 | 275·0 | 359·1 | ... | 155·6 | ... | 183·0 | 149·4 | ... |
| 1939 | 195·7 | 255·6 | ... | 126·1 | ... | 135·6 | ... | ... |
| 1940 | 72·8 | 95·1 | ... | ... | ... | 34·4 | ... | ... |
| 1941 | 17·9 | 23·4 | ... | ... | ... | 5·2 | ... | ... |
| 1942 | 9·9 | 12·9 | ... | ... | ... | 2·4 | ... | ... |
| 1943 | 7·3 | 9·5 | ... | ... | ... | 0·8 | ... | ... |
| 1944 | 6·2 | 8·1 | ... | ... | ... | 0·8 | ... | ... |
| 1945 | 10·6 | 13·8 | ... | 3·0 | ... | 11·5 | ... | ... |
| 1946 | 106·0 | 138·5 | ... | 55·6 | ... | 60·1 | ... | ... |
| 1947 | 142·5 | 186·0 | ... | 160·3 | ... | 84·1 | ... | ... |
| 1948 | 188·3 | 245·9 | ... | 64·1 | ... | 80·1 | ... | ... |
| 1949 | 151·4 | 197·7 | ... | 76·1 | ... | 66·4 | ... | ... |
| 1950 | 151·8 | 198·2 | ... | 93·1 | ... | 80·8 | ... | ... |

# EDINBURGH BANKERS AND THE WESTERN BANK OF SCOTLAND

THE theory and practice of Scottish banking have acquired a high reputation among economic theorists and historians on the ground that the Scots were able to strike a balance between two possibly contradictory objectives, stability of banking structure and easy lending facilities. The black spots in Scottish banking history are taken to have occurred where this balance was not maintained. Of these major black spots one that is often ignored is the failure in 1857 of the Western Bank of Scotland, which has tended to be overshadowed by the failure in 1878 of the City of Glasgow Bank. This neglect of the Western Bank is regrettable, as in some ways the episode is a most interesting one. It was the first major banking failure in Scotland since that of Douglas, Heron and Co. (the Ayr Bank) in 1772, and the first, therefore, since Scotland changed from a primarily agricultural into an industrial economy. It shows, moreover, the divergence of opinion on the functions and methods of banking which existed in that new economic structure, a divergence especially marked between the older Edinburgh bankers,[1] led by the Bank of Scotland, and the new industrialists of the west. While the former emphasised the need for stability of the banking system, the latter emphasised the need for liberal lending. Unfortunately, it has been too often assumed that the policy of the Edinburgh banks towards the Western was blameless. This article seeks to examine the validity of this belief.[2]

[1] The term 'Edinburgh bankers' in this article refers primarily to the five chartered banks of Scotland: the Bank of Scotland, the Royal, the British Linen, the Commercial and the National. All had their head offices in Edinburgh and were able to exercise a general power of surveillance over the other banks. See J. W. Gilbart, *Practical Treatise on Banking* (London, 5th edition, 1849), Vol. II, pp. 554-5 and pp. 561-2.

[2] Much of the information for this article has come from the Scottish press of the period, *The Bankers' Magazine*, and the *Report of the Select Committee on the Bank Acts and Causes of the Recent Commercial Distress*, Accounts and Papers, 1857-8. (381), VI. Since the failure of the Western Bank was one of the most important in this crisis it received considerable attention in the parliamentary investigation. Other useful works are: R. Somers, *The Scotch Banks and System of Issue* (Edinburgh, 1873), *How to Mismanage a Bank* (Edinburgh, 1859) and a collection of papers and documents relating to the Western Bank (including relevant evidence before the Select Committee), *The Western Bank Failure and the Scottish Banking System* (Glasgow, 1858).

## I

At the beginning of the nineteenth century the bankers of Edinburgh did not occupy a very high place in the public esteem. Lord Cockburn's strictures, though fairly well known, deserve further quotation. 'No men were more devoid of spirit, and even of the proper spirit of their trade, than our old Edinburgh bankers. Respectable men they were, but without talent, general knowledge, or any liberal objects, they were the conspicuous sycophants of existing power.'[3] Much of the trouble arose because of the banking structure of Scotland. At that time the chartered banks of Scotland did not normally deal with the general public. An individual usually obtained help only from a private banker, who in turn went to a chartered bank. Apart from anything else this increased the charges to the general public. In addition, the growth of this system led to the chartered banks being largely controlled by the private bankers, who had therefore a decisive say in the granting of loans. But even the favour of a private banker was not always sufficient to obtain a loan, because the lending policies then followed by the Scottish banks caused a large part of their resources to be invested in Government stock, thus diverting funds from home lending.

In an expanding economy such as nineteenth century Scotland these policies were intolerable to many, particularly in Glasgow. To some extent this was due simply to injured local sentiment. Though Glasgow rose during the eighteenth century from a city of little importance to a leading place in most commercial fields, she remained in banking enterprises very much secondary to Edinburgh. Moreover, the bankers of Edinburgh were determined that so long as it was possible this should remain so. Thus when the possibilities of the economic expansion of the west were becoming more and more evident, the Edinburgh banks extended their facilities to Glasgow. In 1749 the Bank of Scotland promoted the Ship Bank and in the following year the Royal Bank set up the Glasgow Arms Bank. When the two offspring began to assert their independence, the parent banks tried to crush them, though without success. The merchants of Glasgow found that they could run their own banks without assistance from Edinburgh. The early rivalries thus started continued for some time and indeed became worse as Glasgow's prosperity increased. Some phrases in the prospectus of the Glasgow Union Banking Company, issued in 1830, are particularly interesting: 'The three local Banking Establishments of this City . . . have proved so inadequate to answer

[3] Henry Cockburn, *Memorials of His Own Time* (edition by Harry A. Cockburn, Edinburgh, 1910), pp. 238-9.

the demand for Bank accommodation, that no fewer than nine Branches of Banks, not indigenous to Glasgow, have been introduced to supply the deficiency.' The chief reason for setting up a new bank in Glasgow seemed to be a wish to prevent any more outside banks from appearing.

But another and a more important factor than injured local pride lay behind the demand for more banks in Glasgow about that time. The city's prosperity, originally dependent on tobacco, then on cotton, was by 1830 on the verge of becoming increasingly linked with the coal and ironstone of north Lanarkshire, though even the older cotton trade continued to grow for another quarter of a century. Prospects of profitable investment were therefore increasing all around. Yet the development of these opportunities, especially in the new industries, was generally carried out by people who had very little capital themselves. Even those who had some could see the possibility of almost unlimited profitable use of more. Large joint-stock banks with liberal lending policies were therefore desirable. Yet because a high proportion of the assets of the Edinburgh banks was invested in Government stock, it seemed to many that a bank such as they required could not possibly come from the east. That being so, the Glaswegians of the day would not let the matter rest there. If no one else would set up the bank they wanted, they would do so themselves. This they did in 1832 when they set up the Western Bank of Scotland.

## II

The first advertisement for the Western Bank struck the keynote of its future policy.

> 'The want of Sufficient Bank Accommodation, on Liberal Principles, having been seriously felt and long complained of in Glasgow, it has been resolved to establish
>
> A NEW PUBLIC BANK
>
> With a capital of Four Millions Sterling, divided into 20,000 shares of £200 each. First instalment not to exceed 15 per cent. or £30 per share. Subscribers to be allowed to operate on their shares to the extent of one-half of their advanced stock, on the principles of a cash-credit, and to such further extent as the circumstances of the Company and the value of the stock may warrant.'

This indicated a policy differing from that followed for some time by the chartered banks of Edinburgh. The older among them had first invested heavily in Government stock during the Napoleonic

Wars, when the funds were standing considerably below par, at 60 or even less. Investing at this level gave them a good return and when prices rose they made considerable capital gains. In many cases these were not realised, however, since the banks did not sell out. Instead they continued to hold an amount equal to between one-third to one-quarter of their total deposits in Exchequer bills or Government stock. The Edinburgh banks held that this ratio should be maintained by all banks, some even being willing to support legislation to achieve it. They believed such a large proportion of their assets should be kept in a fairly liquid form in order to meet any emergencies and thought that only Government stock was satisfactory.

The most important result of this policy was that it lessened the funds available for advances to trade and industry. Thomas Joplin, generally an admirer of Scottish banking, pointed this out: 'It is rather a ground of complaint, that they [the older banks] have been too much in the habit of speculating in the funds, when it might have been more to the advantage of their country that they should have lent out this capital at home; and while lending their money at home appears to be preferable for a Public Bank, to gambling in the funds, it seems also to be the duty of such an establishment to lend its money at home whenever it can do so with safety.'[4] With this judgment the Western Bank agreed and decided to use all its resources in granting cash credits or in discounting bills of exchange. This was not entirely foolhardy. Some very respectable and important English bankers considered ordinary bills of exchange quite as good security as Exchequer bills.[5] Even some country bankers in Scotland agreed, though in practice they followed the example of Edinburgh.

In any event, whatever the merits of the case, a new bank appearing in the 1830s would have found great difficulty in following the precepts of Edinburgh. Owing to increased prices it would have been forced to invest in Government stock at a comparatively low return. What had proved profitable to the older banks would, in the changed circumstances, have ruined a new one. It is not improbable, however, that this would have pleased Edinburgh. Before new joint-stock banks began to appear (after 1830) Edinburgh bankers held regular meetings to agree on interest rates for both deposits and discounts.[6] At that time the rates they allowed on deposits were so low that the banks' prosperity was 'notorious'.[7] Much of the competitive spirit of earlier

[4] T. Joplin, *Essay on Banking*, (London, 4th edition, 1823), pp. 15-16.

[5] *Minutes of Evidence of Select Committee on Joint-Stock Banks, 1836*, especially Qq. 802, 1445, 2613-2618.

[6] In addition to representatives of the five chartered banks, a representative of Sir William Forbes and Co.'s bank was also generally present.

[7] *Minutes of Evidence of Select Committee on Banks of Issue, 1841*, Q.2472.

years had completely gone. The Western, and other banks following its ways, broke these restrictive arrangements, so that by 1841 even the Bank of Scotland, much against its will, was forced to follow the others and raised its rate on deposit to $3^1/_2$ per cent. The public benefited greatly from this. They not only received a higher return for deposits but also paid lower rates for discounts. Naturally the well-established banks suffered. If the Western and its followers had been forced to invest at least a quarter of their deposits in low-yielding Government stock they would have been unable to afford to grant such benefits to the public. The old rule of Edinburgh might then have been completely re-established.[8]

Not surprisingly, therefore, when the Western opposed the Edinburgh policy, it did so with such consistency and strength that it forgot the large element of wisdom in the policy. Consequently, when, in contrast to the older banks, the Western employed a large part of its resources in discounting ordinary trade bills, it placed itself in a highly dangerous position. Any sudden pressure for funds, perhaps through the failure of some of its clients, was liable to strain the Western's reserves. Such difficulties arose almost at once and were the occasion of clashes between the Edinburgh banks and the Western that illustrated their different views on bank lending.

The first came in 1834 when the Western Bank's London agents, Messrs. Jones, Loyd and Co., dishonoured its bills and the Edinburgh banks refused its notes. The latter offered help but only on condition that the Western followed their practice of holding large reserves of Government stock. The Western clearly stated its opposition to this in a letter to the Bank of Scotland.

> 'As far as regards ourselves (and, I am satisfied, all the local banks) they [the proposals of the chartered banks] are impracticable, without destruction to our business, and great injustice to those who depend on us ; nor is it to be expected that we should prefer a fluctuating security to one of permanent value, and a less to a more profitable investment. I conceive it to be the duty, and the *primary* object, of every local bank, to supply every legitimate accommodation to the trading community among whom they are placed. When these demands have been met, the bank may, of course, employ its surplus funds in the purchase of Government securities'.[9]

However, the Western Bank was reluctantly forced to accede to Edinburgh in order to obtain help to the value of £100,000. But,

[8] For justification of this argument see the *Minutes of Evidence of Select Committee on Banks of Issue, 1841,* especially the evidence of Alexander Blair, P. W. Kennedy and J. A. Anderson.

[9] Quoted in J. S. Fleming, *Scottish Banking : A Historical Sketch* (Edinburgh, 1877), pp. 61-2.

perhaps not surprisingly, it soon ceased to fulfil its part of the agreement, and though the Treasurer of the Bank of Scotland remonstrated for four years, the Western does not seem to have held any Government stock at all until 1839. Thus when in 1838 the Western Bank addressed the Board of Trade for the granting of letters-patent, the Edinburgh banks opposed this in a memorial which clearly states their policy on the distribution of assets :

> ' The safeguard of the Scotch banking system has been the uniform practice adopted of retaining a large portion of the capital and deposits invested in Government securities, capable of being converted into money at all times, and under all circumstances. This requires a sacrifice because the rate of interest is small, and in times of difficulty the sale involves a loss ; but it has given to the Scotch banks absolute security, and enabled them to pass unhurt through periods of great discredit.'

It was then pointed out that the principle on which the Western Bank ' has avowedly acted, has been to employ as much as possible of its capital and assets in discounts and loans, retaining only the cash necessary to meet its current engagements. As this is a more profitable investment than Government securities, there is always a strong temptation to speculative or inexperienced persons to adopt this course ; and, if the consequences were to affect themselves alone, it would be of small moment. But unfortunately in banking this cannot be, for the failure of an ill-regulated establishment affects those differently constituted '.[10]

In view of this strong objection it is hardly surprising that the application for letters-patent was unsuccessful. The Western amended its ways slightly. From 1839 to 1848 the balance sheets show the item : ' Government and other securities ', which, however, never rose above £53,000. Rather significantly, when the Western experienced more difficulties in the crises of the autumn of 1847, it did not approach Edinburgh but went direct to London, where, in November and December of that year, it received £300,000 from the Bank of England, repaying it in February and March 1848. Yet even this second spate of trouble did not convince the Western of the rightness of the ways of Edinburgh. There was little increase in the item ' Government and other securities ' compared with the growth of the bank's business. Indeed, up to the close of business, when deposits were over £5m., this item was never higher than £282,000. Only in some of the more risky of the bank's operations, the discounting of bills of exchange, was more caution shown after 1847. During that year total bills

[10] Quoted in Fleming, *op. cit.*, p. 64.

discounted amounted to nearly £16m. but in 1848 they fell to just over £12m., while in the same period bills rediscounted fell from £657,000 to £375,000. This slightly greater caution lasted till 1852, when there was a change of management and a reversal of the policy of caution.

If bad banking principles annoyed the Edinburgh banks in the first place, the apparent prosperity of the Western Bank in spite of them only made matters worse. The bank met with immediate success. It could not have been founded at a better time or place. The iron industry of the west of Scotland was just beginning to rise and spread prosperity throughout the district in which the Western soon had a large number of branches. Within a decade of its foundation the bank had twenty-six branches, within another, seventy-three and by the time of its failure in 1857 over a hundred. Moreover, at that time it had one of the largest note circulations of any Scottish bank ; its paid-up capital of £1·5m. was the second largest in Scotland and its deposits were over £5m. The extensive system of branches, as well as late-night openings in Glasgow, attracted many small depositors to the bank. They were encouraged even more when the Western (as well as the City of Glasgow Bank) gave depositors $^1/_2$ per cent. more on their deposits than the other Scottish banks. The result was that by 1857, of the 42,000 depositors with the Western, 26,000 were for amounts of under £50.

The bank also had the wealthiest of the western industrialists among its proprietors, clients and directors. In 1857 the Baird family (of the Gartsherrie ironworks) held 1,886 shares between them, and from 1839 onwards at least one of the brothers was among the directors. So, too, was either James or George Burns from 1840 and James Dunlop of the Clyde ironworks from 1846. Many other well-known Glasgow men sat with them—Alexander McAslan, Andrew Buchanan of Mount Vernon, James Bogle, Thomas McCall and others. Western Bank shares were quoted at a considerable premium on the Glasgow Stock Exchange but rarely entered the market as few of those who held them ever wanted to sell. As the failure approached, the desire to hold was strengthened when in 1856 the dividend was raised to 9 per cent. The following year, although profits fell by £20,000, to about £146,000, the rate was maintained and almost £11,000 carried forward to the reserve. In spite of its heretical principles the Western Bank seemed set to prosper.

## III

When the Western Bank failed to survive the monetary crisis of November 1857 there seemed at last to be a complete vindication of the policies of the older banks, even though it had been delayed for

a quarter of a century. As a result, some have made rather sweeping condemnations of the Western while others, particularly the historians of the Scottish banks, dismiss both its career and its failure in a surprisingly summary fashion. The impression is given that no case at all can be made out for the bank or for the ideas which inspired it; and it is often assumed that the Edinburgh banks acted entirely commendably throughout the whole episode. Kerr's judgment in the *History of Banking in Scotland* may be taken as typical. He condemns 'the recklessness and speculativeness which has always been too characteristic of banking as conducted in Glasgow, more especially, but also elsewhere by banking companies dominated by the mercantile spirit. Nearly, we might say absolutely, all the banking disasters in Scotland can be clearly traced to too intimate a connection between the management of the banks and the mercantile section of the community'.[11]

This article seeks to modify this type of judgment. Admittedly others have gone to an extreme in favour of the Western Bank. Some years after the failure one pamphleteer wrote that 'during the existence of the "Western" and the "City", Scotland rose rapidly in wealth and comfort. To a man possessed of ability there was then a fair field and opportunity for him to create wealth for himself, thus being a benefit to his country and a help to his fellows. In those days wealth was truly the handmaid of industry and the result can be seen in almost every quarter of Scotland in an enlarged commerce and social comforts'.[12]

This attitude is equally false. The Western Bank was far from being the paragon of all virtues but, contrary to Kerr's belief, neither the fact that the Western was more closely allied to the mercantile section of the community nor the fact that it was more liberal to industrial enterprise in its lending policies was the only cause of its failure. While these might have contributed to the crisis, the actual stoppage was brought about through very considerable loans having been made to a few large firms which were dependent for much of their prosperity on the American market. Such action cannot be explained simply by liberal lending but only by unbelievably bad management, which could conceivably have ruined a bank conducted even on the most conservative lines. In brief it is highly probable that the Western Bank could have survived if it had not suffered from a series of utterly incompetent managers. The first, William Mitchell, had to be dismissed

[11] A. W. Kerr, *History of Banking in Scotland*, (London, 4th edition, 1926), p. 123.

[12] Scrutator, *More Elbow-Room in Scotch Banking; or Free Trade for Scotland on the Basis of Consols*, (Glasgow, 1881), p. 9.

within two years of his appointment, but the succession did not improve. The worst of all came last, John Taylor, appointed manager in October 1852 and dismissed three weeks before the failure.

Although the bank was not in an entirely satisfactory position, especially after the troubles of 1847, Taylor's immediate predecessor, Donald Smith, showed some caution. Taylor showed none. His actions towards four firms, Macdonald and Co., Monteith and Co., Wallace and Co., and Godfrey, Pattison and Co., are inexplicable. The case of Macdonald and Co., Scotch muslin manufacturers, may be taken as an example. Until a short time before their failure they had been, admittedly, in fair credit. Then it was announced that, instead of dealing with wholesale houses as in the past, they were to deal with smaller concerns in order to widen operations. The real purpose of this announcement was to arrange for the issue of fictitious bills. These bills appeared to be trade bills issued in payment for goods, but, in fact, they represented no trade transaction at all and were simply issued by several worthless people in return for a small commission from Macdonald and Co. This should have been obvious to Taylor as the current bills held by the Western Bank at the time of its failure, amounting to £400,000, had been accepted by 124 different persons. The bank had made enquiries of its correspondents about only thirty-seven of these people ; only nine were reported in good credit, seven were fair but no less than twenty-one received adverse reports. Although the other three firms may not have been as disreputable as Macdonald and Co., the credit of none was exceptional. Yet together the four firms owed the Western Bank over £1·6m., slightly more than its paid-up capital.

Moreover, through an agency in America, Lee and Co., the Western Bank had for some time financed a considerable amount of investment in the United States, particularly in railways. The procedure was for individuals in America to approach Lee and Co., who then gave them a letter addressed to the Western Bank asking the bank to honour drafts drawn upon that letter of credit. While this was a risky procedure, it had been in operation for some time and had not reached the major proportions of the loans to the four firms. At the time of the failure, advances on this account were just under £270,000, with the Western Bank obliged to accept bills to the further extent of £49,000.

In the circumstances a severe recession of trade in America was liable to affect the Western Bank severely. This is largely what happened. At the beginning of 1857, trade in this country was prosperous. But first the Indian Mutiny and then economic difficulties in America led to an export of bullion. The situation worsened at the

beginning of October, when several large and important banks and firms in America failed. The first Bank of England Return in October showed a fall of gold in the Bank of over £600,000. The following week it went down by over £550,000. Bank rate was raised to 6 per cent. on 8th October, the first change since July, and continued to rise to 10 per cent., remaining at that rate during the suspension of the Bank Charter Act. Throughout this period of increasing difficulty several failures occurred, among them being the four concerns heavily indebted to the Western Bank. Wallace's led and Monteith's and Macdonald's followed shortly afterwards. Suspicion immediately fell on both the management and the solvency of the bank, and the price of its shares began to fall. Western Bank shares had generally been difficult to obtain on the Glasgow Stock Exchange but in the autumn of 1857 they were offered increasingly freely. The lack of confidence continued to spread. On 10th October a slight run began on the Western involving both gold and the withdrawal of deposits. This lasted for only a few days but the position of the bank became highly precarious. Help had to be obtained both in order to meet any further withdrawals of deposits and to meet American acceptances as they fell due, and desperate efforts were made to obtain it in the latter half of October. The Edinburgh banks were approached but refused until the Bank of England had first been tried. When the latter refused help, the application to Edinburgh was renewed.

From this point onwards the conduct of the Edinburgh banks must bear some of the blame for the ultimate downfall of the Western Bank. Mismanagement had brought the bank to its precarious position and much that it had done had been against advice from Edinburgh. But the directors seemed at last to be roused from their unbelievable lethargy and their choice of a new manager in the law officer of the bank, J. S. Fleming, could not have been bettered. He was to prove, as General Manager of the Royal Bank, one of the outstanding bankers of the nineteenth century in Scotland.

With its strong and influential connection in the west of Scotland it is not at all impossible to believe that had the bank been helped over the 1857 crisis its future might have been bright. Wider considerations, too, reinforced the desirability of keeping the bank going if possible. The failure of any Scottish bank, but especially that of a major one such as the Western, was certain to play into the hands of the opponents of Scottish banking and its privileges, particularly its note issue.[13] Moreover, it was clear to everyone that a failure of such magnitude was bound to spread distrust and difficulty throughout

[13] The reaction duly appeared in the English press, even in responsible journals.

the whole Scottish economy. It might have been expected, therefore, that the Edinburgh banks would have done all in their power to support the Western ; but this they did not do. It is not entirely uncharitable to suggest that the Edinburgh banks were anxious to seize this opportunity of getting rid of an important and embarrassing rival.

The first offer of help made by the Edinburgh banks seems to bear this out. A condition of their offer of a credit of £500,000 in October 1857 was that the Western should wind up its business. Even when the managers of two other Glasgow banks, the Clydesdale and the Union, went to Edinburgh and tried to obtain a modification of this condition, no concession was made. Only when it was pointed out that the directors had no legal powers to wind up the Bank, because this required the permission of the shareholders, was the £500,000 advanced unconditionally. The Edinburgh banks, however, ran no risk because they demanded adequate security for their loan, including a personal guarantee from the directors, among whom were some of the wealthiest men in Scotland. The Union, one of the two leading Glasgow banks which had helped in the negotiations between the Western and Edinburgh, joined in this bargain but the other, the Clydesdale, stood apart. In a more brotherly fashion it advanced £100,000 on its own account with fewer safeguards.[14]

These hesitations caused the negotiations to last for over a week and consequently increased the lack of faith in the bank at the very time when confidence was essential. Moreover, the feeling of mistrust against the Western was intensified by reputed attempts on the part of the Edinburgh banks to secure its customers. This action was not surprising since for some time previously there had been rivalry to increase the number of branches. As the Western and the City of Glasgow had set the pace in this race the local agents of the other banks were naturally glad to gain any ground whenever possible. Certainly, immediately after the failure, the Edinburgh banks, led by the Royal, were quickly at work in the field. Twelve days after the failure, sixteen branches were reported to have transferred their allegiance, twelve to the Royal and one each to the Bank of Scotland, the British Linen, the Commercial and the National. But even three weeks before the failure, J. S. Fleming wrote to the Treasurer of the Bank of Scotland asking him to instruct his agents not to try to persuade customers of the Western to transfer their deposits to some

[14] The more brotherly attitude of the Clydesdale is also shown in its not trying to obtain Western branches immediately after the failure. It soon made up for this and acquired a large number, especially in Ayrshire.

of the Edinburgh banks. The previous week, the City of Glasgow Bank, which like the Western had an extensive branch system, issued independently a circular to this effect to its agents.

Confidence was thus in a very precarious state when *The Times*, on 29th October 1857, announced erroneously that the Edinburgh banks had made an advance on condition that the Western be wound up. An increased run on the bank developed at a time when there were already considerable withdrawals from it to pay the Martinmas rents. Since most of the withdrawals were not in gold but in notes, which then went to the other banks, the balance of exchange against the Western was considerably increased. This led to a further application for assistance being sent to Edinburgh on the last day of October. Fleming proposed that the balances of exchange between the banks for the next few weeks, so far as they arose from the transference of deposits, should be settled by promissory notes at three months' date from the Western to the other banks. These were to be secured by a deposit of bills with the Bank of Scotland and a letter of guarantee. In spite of its reasonableness, the application met with scant consideration. Even a proposal for an amalgamation with the Clydesdale, an idea canvassed some years before,[15] did not bring forth any offers of help from Edinburgh and the Western Bank was forced to close its doors for ever at 2 p.m. on Monday, 9th November 1857.[16]

At this point came the most culpable action of the Edinburgh banks when, for two days after the failure, they refused to accept the Western banknotes. Because of the vast resources of some of the proprietors there was no doubt whatever that all the liabilities of the Western would be met in full ; and if the stability of Scottish banking and of the Scottish economy had been the only factors that concerned the Edinburgh banks these notes should never have been refused even

[15] For the earlier proposals see J. M. Reid *The History of the Clydesdale Bank* (Glasgow, 1938), pp. 105-6. An amalgamation before the failure would have made a prosperous future for the Western Bank almost completely certain. A comparison may be drawn with the events of the following year, 1858, when the Edinburgh and Glasgow Bank, which ran into difficulties at the same time as the Western, amalgamated with the Clydesdale. Admittedly the benefit of this amalgamation went almost entirely to the Clydesdale but it enabled the whole business of the Edinburgh and Glasgow to be continued.

[16] The City of Glasgow was also forced to suspend payment shortly afterwards. It, however, was able to reopen after a month.

momentarily.[17] Two of the Glasgow banks sent a deputation to Edinburgh on Tuesday, 10th November, asking the banks to accept the Western notes but their request was refused. A lead had to be given by others. The Magistrates of Glasgow issued a proclamation advising the people to accept Western notes and, on the Wednesday morning, instructed the rent collectors in the city to accept them. Others did likewise, notably the Earl of Eglinton, who, almost at once after the failure, announced that he would accept payment of his Martinmas rents in Western notes.

Indeed, in Glasgow generally more influential opinion was not greatly disturbed. The *Glasgow Herald's* leader immediately after the failure expressed both optimism—' the public will ultimately be no losers '—and disapproval—' we cannot help expressing surprise that in a mercantile community such as Glasgow such a want of common sense should have been exhibited on the part of the depositors, seeing that no cause whatever existed, and we hope that the panic will now subside '.[18] Two days after the stoppage the members of the Royal Exchange issued a manifesto expressing ' full confidence in the solvency of the Western Bank and City Bank, as well as of the other banks in Glasgow ' and announced that they would continue to use the notes of these banks in their business. Within a week a glaxy of aristocratic and commercial leaders attended a public meeting in Glasgow to express their confidence in the entire Scottish banking system, not least in the Western. Much of the confidence in Glasgow undoubtedly sprang from the belief, fairly widely held in the west, that the greatest blame for the failure could be attributed to the Edinburgh banks. The *Glasgow Herald* maintained that the feeling in Glasgow was ' all but universal ' that ' the Western Bank sank temporarily at least from the indifference or hostility of the Edinburgh banks '.[19] A vitriolic

[17] Two comments, one at the time of the failure, the other twenty years after, may be quoted in support of this statement : ' It is extremely to be regretted that the other banks, after the very liberal assistance they had afforded to the Western Bank, had not at once consented to receive their notes and have thus prevented the rapid spread of the panic which ended in a common run upon all the banks, and in an abstraction of bullion from the Bank of England to meet it, to an amount of at least £1·5m. '. *The Economist* (1857), p. 1259.

J. S. Fleming's comment twenty years after the event is particularly interesting : ' Such a step was calculated to aggravate—and it did immeasurably aggravate—the feeling of distrust at a time when it was alike the duty and the interest of the banks to calm and soothe the alarm and apprehension of the people. Great allowance, no doubt, must be made for the fears and excitement attending an event so unprecedented as the stoppage of a large bank in Scotland but still the step was unwise '. Fleming, *op. cit.*, p. 39.

[18] *Glasgow Herald*, 11th November 1857.

[19] *Ibid*, 18th November 1857.

campaign then took place in support of the Western Bank and in condemnation of Edinburgh.[20]

The reiteration of confidence was insufficient to reopen the closed doors of the Western. Various attempts were made to devise means of doing so but all were unsuccessful. In the first place, the Edinburgh banks, whose help would have been necessary, were naturally not well-disposed to the suggestion, especially since they were fast acquiring the business of the Western, though, despite a strong attempt, they failed to obtain the note issue. But in any case some of those who had been associated with the Western were no longer anxious to continue as bankers. Thus all the schemes for reopening the bank failed, and in February 1858 it was finally decided by the shareholders to go into voluntary liquidation.

## IV

It is difficult to form a straightforward opinion on the part played by Edinburgh bankers in the history of the Western Bank. Undoubtedly the two followed different paths in many things. If the Edinburgh bankers were too conservative there is no doubt that the Western Bank was foolhardy. It is safe to say, however, that the Edinburgh bankers do not come out of the tussle in the entirely glorious light in which some historians would place them. These writers include Kerr and, in so far as they deal with the episode, most of the historians of the Scottish banks.

Much of the dispute hinged round the proportion of assets which should be invested in Government stock. It may be argued that the Edinburgh ratio of one-third to one-quarter gave the whole Scottish banking system its high reputation for stability. But it should also

[20] The campaign took the form of public meetings and especially of violent leaders in the press. Apart from any principles, local pride was largely responsible for the excesses of the campaign. This may account for the classic leader of the whole episode in the *North British Daily Mail* of 13th November 1857 : ' It is really a slur upon the mercantile character of Glasgow, a direct home-thrust at all in which our strength and honour as a city consist, that the unlimited liability of the Bairds, the Dunlops, and the Douglasses of the Western Bank, and of the Orrs, the Campbells, and others of the City should be contemptuously thrust aside for the liability, sometimes limited, of Dukes and Marquises, whose estates are mortgaged up to the hilt and almost always entailed from their creditors, of Edinburgh lawyers whose trade is daily going down, and Highland lairds whose pedigrees are a good deal longer than their purses . . . Never again must the first men of Glasgow be asked to humble themselves before a parcel of Writers to the Signet in Edinburgh on a question affecting the credit and commerce of the city '. But it was clear that more than local pride was involved when to the great surprise of the *Scotsman*, which supported the Edinburgh banks, its ' cautious and respectable contemporary ', the *Glasgow Herald*, led the ' coarse clap-trap ' (*Scotsman*, 25th November 1857).

be remembered that other equally stable banks did not adopt this distribution. Moreover, in Scotland many believed that the chartered banks had followed it in the first place for no other reason than that it was most profitable. Also some thought Edinburgh wanted the new banks to follow suit in order to prevent them from gaining a dominant position in Scottish banking. Most important of all, however, it is possible to argue that their policy led the Edinburgh banks to neglect the wider interests involved in the economic development of Scotland : in other words, their emphasis on stability was so excessive that quite legitimate demands from industry and trade, though perhaps of a more risky character, may have been ignored. Certainly, in addition to local sentiment, this belief was a major factor in the origin of the Western Bank and was the cause of the constant disputes between the Western and Edinburgh throughout the former's career.

The position adopted by the Edinburgh banks is, of course, justifiable ; but a retardation of economic growth may result if, because of such a policy, adequate advances are not made to trade and industry. It is doubtful if this was fully appreciated by the Edinburgh banks. Evidence to support this view may be brought from another field. Less than a year before the stoppage of the Western Bank, when the Scottish banks were asked for their opinion on the Bank Act of 1845,[21] the Edinburgh banks generally gave their approval to the measure. On the other hand, the Glasgow banks objected strongly. They thought that the restriction placed on their note issues by the Act prevented the legitimate extension of their operations necessary to meet the expanding needs of industry and trade. Moreover, when the Glasgow banks objected at the same time to the difficulties they experienced because of being unincorporated, the Edinburgh banks did not support their appeals. In the years after 1830 the newer banks had broken much of the control of Edinburgh and it seems that, though the older banks were obviously interested in maintaining the stability of Scottish banking, they were just as interested in holding their dominant position in it. When some of the Edinburgh banks suggested, in their letter to the Select Committee on the Bank Act, 1857, that it was advisable to prevent a repetition of the competition between banks that had taken place in Scotland before 1844, it is possible to read into that statement, with every justification, a fear that still more competition might dislodge them entirely from their leading position.

Admittedly, even if the conduct of the Edinburgh banks is not entirely blameless, no one could possibly exonerate the Western Bank. But it is necessary to distinguish between the ideas behind the bank

[21] See *Report of the Select Committee on the Bank Act, 1857*, Accounts and Papers, 1857 (220, Session 2) X, Appendix 41.

and the failure of its managers or indeed the failure of its directors.[22] The latter, not the principles of liberal lending alone, caused the failure. It is to be regretted that the Edinburgh banks did not fully appreciate the aspirations that lay behind the Western. Had they done so, and met the desires and aspirations of the west of Scotland sooner than they did, much misunderstanding and difficulty might have been avoided ; and Scottish banking might have retained the fair name which the bankers tried so jealously to guard—at least until the failure of the City of Glasgow Bank in 1878.

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[22] There is perhaps nothing more interesting, and also more inexplicable, in the history of the Western Bank than the miserable performance of the directors. Unlike the City of Glasgow directors there was absolutely no fraud in their conduct. Although some of the shareholders had received fairly large advances this was not so with the directors. They failed, however, in their responsibility to choose the right men as managers, at any rate until they chose J. S. Fleming three weeks before the closure. Moreover, they were satisfied with a somewhat cursory presentation to them of weekly accounts, though this would stem from their reliance on an inefficient manager.

# THE DOLLAR SHORTAGE ONCE MORE

## A REPLY

### I

PROFESSOR MACHLUP is perhaps not quite fair[1] in his criticism of my theory of the causation of the dollar 'shortage' based on a disparate growth of productivity, a theory which has been accepted first by Professor Williams and more recently by Professors Sir D. Robertson and Hicks. He says (or rather quotes Professor Haberler's criticism with approval) that I have never realised that a 'real' dollar problem could only arise through import displacement by the U.S., and that I confused the effects of a more rapidly *increasing* productivity with the effects of the *actual* preponderance already achieved of the U.S. (acquired to a large extent through superior productivity). He ends by restating the view that the dollar shortage is the consequence of all other countries' desire to live above their means.

Let us deal with these points in turn.

1. His first quotations—somewhat abruptly lifted from their context—show that I was not unaware of the problem of the mechanics of increasing productivity. Indeed he supplies the emphasis to the words that if there were 'prodigious investment activity in the U.S.' its '*competitive power*' would rise faster and cause 'periodic pressure abroad'. How anyone can interpret the analysis referring to an increase in *competitive power* of the U.S. as meaning anything but a deterioration of the relative position of British industries, *i.e.* a disparate increase in efficiency in manufacturing in the U.S. rather than a uniform increase in productivity, or an increase in productivity in agriculture and mining which provide British imports, is certainly beyond me. But I was interested not in an abstract model but in the Dollar Problem.[2] And in that context it would be quite incorrect to ascribe

[1] 'Dollar Shortage and Disparities in the Growth of Productivity,' *Scottish Journal of Political Economy*, Vol. I, No. 3 (October 1954). I should, perhaps, be grateful to Professor Machlup (and also to Mr. H. G. Johnson—*cf.* note 3 below) for having mentioned my name at all in this context. None of his immediate predecessors did. But then he is sharply critical of any reconsideration of age-old fallacies of blaming the dollar shortage on financial recklessness, while his colleagues at last consented to begin to look at the problem anew. In so far as I am bound to be interested in the spread and acceptance of my ideas among the orthodox (especially among the administrators) my special debt to Professor Machlup is reduced.

[2] It is, of course, entirely possible that an inferior country should get into trouble because of its high price and income elasticity for imports. In the context of the quotations I did not discuss that particular contingency (*cf.* below, §4).

the worsening of the British position merely to an import-displacing improvement in America. An improvement in U.S. *export* industries *competitive* with Britain in *third markets* would have the same effect.

2. Nor must the worsening of the competitive position be taken always to mean an actual worsening of the terms of trade. The dominated economy might chose between a worsening of its terms of trade and unemployment (which would tend to improve its terms of trade and thus counteract the primary impact of technical progress). In fact a two-country model is quite incapable of throwing light on the problem even if the customary two commodities are replaced by four.[3] It obscures the unevenness of the impact of technical change

[3] I am puzzled by Mr. H. G. Johnson's recent contribution to this problem ('Increasing Productivity, Income Price Trends and the Balance of Payments', *Economic Journal*, September 1954, pp. 762-785). No doubt his drastic simplifications, the assumption of continuous full employment, fixed 'elasticities', the ruling out of marginal displacement by assuming that only two non-inferior commodities exist, are all needed to get an elegant determinate mathematical answer. What is odd is why the most acid critic of the aprioristic taxonomy of comparative statics (*cf. Economic Journal*, 1951) should suddenly think that the answers obtained in this way should in the remotest way be applicable to the position of the U.S. and the dollar problem. They are applicable to a system of two countries producing two commodities only, a system which is entirely static in the sense of full employment being maintained entirely 'behind the scenes' and 'elasticities' (*i.e.* reactions of the balance of payments to changes in prices or incomes) remaining not merely fixed but positive. As fixed 'elasticities' and propensities *define* the character of the reaction in the balance of payments, one is left wondering what the contribution amounts to in any case, apart from spelling out the truisms flowing from the quaintness of the assumptions: nothing can be less like the relationship between the U.S. and the rest of the non-Soviet orbit.

The assumption that income 'elasticities' are positive seems only common sense when contemplating a two-commodity model. Yet it seems to exclude the most important case of brusque displacement of the exports of the 'inferior' country and the concentration of increases in spending both in the dominant and in the dominated countries on 'new' products likely to be developed in the country having the largest outlay on research. The development of marginal import propensities of the U.S. since 1920 entirely bears out this suspicion. As both Professor Hicks and Sir D. MacDougall now clearly see, *non-reversibility and oligopolistic reactions by countries to other countries' policies are the rule and not the exception.* Mr. Johnson's model is incapable of handling this. Nor can he handle disproportional increases in imports induced through increases in income. By assuming full employment and omitting to analyse monetary (employment) effects he has ruled out the short and medium term dollar problem. There is an intimate inter-relationship between the real and the monetary side of the problem (different in the short and the long run) which in its turn is influenced by the historical situation. This gives an effective answer to Mr. Johnson's interesting surmise (p. 471, no doubt entirely justified in his model) that when difficulties arise because of the inability of the U.S. to adjust incomes to the increase in productivity, conditions will *ipso facto* also be *favourable to devaluation.* (The fallacy is the assumption of unchanging propensities despite the fact that beyond full employment level and price 'elasticities' increase as rapidly as they fall in the case of under-employment.) The reaction to an increase in employment is not the same as that to a fall. A number of asymmetries exist in both countries' reactions.

on other countries and thus rules out the specific dollar problem (though it might enlighten us on the long-run problem of the sterling terms of trade). I have tried elsewhere[4] to clear up the muddles implicit in the attempt to use a 'classical' model for this particular purpose. But Professor Machlup cannot resist the simplicity of such a model (however critical he is of the conclusions to which it leads) as he does not wish to depart from the comparative static analysis which *a priori* excludes the problem which he wishes to analyse.

3. The second question concerns the impact of the size of the U.S., which, according to Machlup, has no bearing on the problem. This view once again shows his inability to free himself from his static assumptions. The unequal size and power of the U.S. relative to other countries has important short term monetary (*i.e.* mainly employment) and longer term 'real' (*i.e.* mainly terms of trade) consequences. If, to take the *monetary* impact first, the U.S. were smaller it might respond to gold inflows (*i.e.* gold losses elsewhere) of a magnitude tolerable to the rest of the non-Soviet world. Thus there might not be net deflation in the system as a whole. As it is, the world might well have to be denuded of liquid reserves before the U.S. would be impelled to expand.[5] In the second place some of the '*real*' advantages of the U.S. are entirely due to the scale of her markets and production (and not merely to the intensity of capital investment) and could be remedied only by an appropriate closer economic (preferential) union of the rest of the non-Soviet world.

4. The issue is further complicated by the fact that in the short, medium and long term each of these aspects of the problem of international economic inequality has divergent impacts and that the incidence of the gains and losses is thereby further complicated. This complexity explains why much of the discussion has proceeded on different planes of abstraction, and why the arguments hardly ever met.

Mr. Johnson, however, has assumed away oligopolistic phenomena which Professor Hicks now accepts. The same applies to the even more paradoxical conclusion (p. 477, which presumably was intended as a convincing *reductio ad absurdum*) that 'on the assumption of adverse elasticities . . . any dollar shortage could be cured by sufficient inflation (in the inferior countries) or appreciation against the dollar'. Perhaps the time will come when authors will abide by the sef-imposed limitations of their model, chosen for mathematical elegance and determinateness, and not attempt to have it both ways all the time.

[4] 'The Dollar Crisis Revisited, *Oxford Economic Papers* (October, 1954).

[5] An enlightened economic regime need not of course wait until it was *impelled* to expand: it could start an expansion. It should be noted, however, that Professor Machlup and his like-minded colleagues would be the first to protest against such 'inflationism', and point out that an analogous attempt by Governor Strong to relieve Britain in 1927 did not end well.

Thus, on the ' monetary ' side Professor Machlup and Professor Hicks both confine their analysis to the consequences to the balance of payments due to a failure of wages to rise in the progressive country. They did not analyse the more important case of the ' equilibrium ' being upset by undue increase in the imports of the ' inferior ' country as a result of the displacement of its import-competing products by technical progress in the ' advanced ' country (*e.g.* cotton imports into India after 1800). The converse monetary effect of rendering ' inferior ', and thus displacing by home products, imports from the less progressive country also escapes Professor Machlup's attention. Professor Hicks is certainly right in regarding developments which demand periodically recurrent devaluation with apprehension, a case which Professor Machlup entirely ignores (pp. 262-3) by demanding repeated ' readjustment '. No doubt a certain bias in the growth of productivity has the important further consequence of turning the terms of trade against the inferior country[6] (p. 265) but the *absolute* disparity between the rates of growth has an analogous (because monetary) importance.[7]

5. Nor is Professor Machlup quite fair to Professor Hicks (p. 261) when he argues that the favourable terms of trade of Britain in the 1930s show the non-existence of a pressure originating in the U.S.: as we have already pointed out, favourable terms can be (and, of course, in the case of pre-war Britain, were) purchased at the cost of unemployment. Equally daring is Professor Machlup's assertion (p. 261) that there could be no pressure emanating from the U.S. as money wages were steadily rising: he ignores the fact that the rise in money wages was dampened by rapid technological progress and lagged behind other countries and that real wages remained well below the increase in productivity (as one would expect in a period of rapid advance). The improvement in the income distribution in the U.S. was entirely due to taxation and fuller employment.

There is, of course, in real life no reason why a country should not be able to undersell many others *all along the line:* it will attract their gold reserves. This indeed can go on so long as there is a net accretion to the world's gold reserves and it is sizeable in terms of total world trade.

[6] The important bias in this respect is the labour-saving rather than the import-substitution bias.

[7] Professor Machlup's contrary conclusion (p. 265) is also due to his failure to see that ' elasticities ' in international trade are neither independent of one another nor of the degree of employment.

## II

Having dealt with what I consider the shortcomings of Professor Machlup's case, I should like to restate the problem in positive terms.

6. The case against free or even freer trade rests on certain assumptions. For Professor Machlup to be able to refute this case he must show either that these assumptions are wrong or that errors in logic have been committed in drawing conclusions. I submit that he has done neither. These assumptions and their corollaries are:

(*a*) that in the technical superiority of the U.S., increasing returns (and thus the size of the U.S. markets) play an important role and an equalisation is impossible without protecting infant regions;

(*b*) that the inequality in income between the U.S. and a vast part of the rest of the world is large and increasing, that technical progress is likely to accelerate the rate of deterioration and that therefore measures which would reduce inequality are desirable;

(*c*) that in these conditions the term 'world income' and its 'maximisation' has no meaning. Measures which turn the terms of trade against the U.S. would improve the distribution of income. It should be noted that this argument is separate from (and to some extent an alternative to) the argument for protection on the basis of the need to help to overcome the effects of increasing returns;[8]

(*d*) that the rate of saving in the less progressive areas is not independent of, and is likely to be reduced by, liberalising trade. Consequently liberalisation (in so far as it increases the likelihood of increasing the imports of luxuries) will lead to a fall in the rate of feasible investment and prevent the overcoming of the inferiority of the less progressive areas;

(*e*) that it will depend (i) on the relative size and the character of the dominant country, (ii) on its policies, especially on its willingness to grant direct aid to overcome inequality through increased investment, (iii) on the relative intensity of progress and its bias in favour of labour saving, and (iv) on the absolute level of comparative cost differences, how many of the less progressive countries will obtain a *net direct* benefit from trade, *i.e.* benefit after due allowance for the direct losses due to displacement or for the indirect losses due to prevention of their own accelerated development and the ex-post worsening of their terms of trade.[9] If the number of countries harmed is large and their relation to one another complementary, discriminat-

[8] It is impossible to say *a priori* which of the two policies should be applied in any particular instance. It will depend on the circumstances of the case.

[9] Cf. E. A. G. Robinson and R. L. Marris, 'The Use of Home Resources to Save Imports,' *Economic Journal* (March 1950).

ing protection (of infant regions) is both possible and desirable. Some protection is in any case desirable in the infant countries to promote their development.

7. This brings me to the final and crucial point: Professor Machlup at two points of his article (pp. 262 and 267) enjoins countries to be willing to take *cuts in their standard of life*. He does not even pause to enquire

(*a*) whether these cuts are inevitable or could be avoided, or at least minimised, by a policy alternative to the one advocated by him,

(*b*) whether, therefore, his preference for the policy he advocates is ' purely economic '[10] or rather ' political '.

8. There can be no doubt (and I do not think that anyone has ever denied this) that ' equilibrium ' in international payments, dollar or non-dollar, in the sense of abolishing all discriminatory and even all direct controls over payments and/or trade, can be achieved. The achievement of this balance will, however,

(*a*) diminish the real ' income ' valued at conventional prices of a larger and poorer part of the non-Soviet orbit through a worsening of its terms of trade with the U.S.[11]

(*b*) maldistribute the diminished ' income ' of the poorer areas through a rise in the price of necessities relative to that of luxuries consequent on the abolition of controls;

(*c*) render any action to lift the relative level of income in poorer areas (and thus action to decrease international inequality) through an increase of investment more difficult because of (i) the fall in the supply of foreign exchange available in poor countries for the purchase of necessities, including capital goods, and (ii) the impossibility of overcoming the economies of scale available elsewhere without initial protection.[12] Thus the inferiority of the poorer areas will progressively grow worse;

(*d*) produce conditions demanding periodic further readjustments by the poorer areas.

9. Thus the ' free ' trade argument can certainly not be based on direct ' welfare ' considerations. Authors are, of course, nevertheless

[10] I do not accept the fashionable schizophrenic distinction between the absolute magnitude of ' ecfare ' and its distribution, but Professor Machlup, I presume, would.

[11] As Professor Kahn convincingly demonstrated, foreign countries instituted protection against the U.S. because they tried to escape further worsening of their relative standard and not to ' reap monopoly profits '. The use of the slight relief experienced in the past two years to liberalise trade rather than increased investment has left the poorer areas, especially Western Europe, wide open to any relapse in world conditions.

[12] Subsidies are not in fact practicable.

quite free to advocate this course of action. They must, however, either

(i) furnish good cause why they expect the intangible results of their policy recommendations (*e.g.* an increased supply of entrepreneurship or increased willingness to take risks) to offset the inevitably unfavourable direct consequences of those policies to poorer areas, or

(ii) state bluntly that *notwithstanding the unfavourable effect on welfare* they attach so much moral or political value or derive so much non-economic satisfaction from restoring or safeguarding the free functioning of the price mechanism *as an aim in itself* that they are willing to recommend (to other people) to undergo this, otherwise unnecessary, hardship.

I have yet to encounter anyone who has 'spelled out' (or even realised) what the advocacy of 'free' markets amounted to in terms of the consequences to poorer areas despite the fact that the whole history of underdeveloped areas (including that of early nineteenth century Germany and U.S.) and especially that of South East Asia[13] represents an overwhelming and unanswerable proof of my view.

10. In saying all this (and it needs saying every day in the West) I do not wish to suggest:

(*a*) that *protection by itself* will cure the malaise. Without investment undertaken (preferably with foreign help), and enforced rationalisation to avoid product differentiation, protectionism merely deteriorates into protecting a rapacious upper stratum; or

(*b*) that *cumulatively increasing protection* (as U.S. superiority increases) would *by itself* help to equalise real factor rewards or even to avoid a (relative) decrease in the real income of the inferior areas.

Indeed, it is quite obvious that beyond a certain point (determined partly by the nature of production functions and comparative cost differences and partly by the degree of retaliation that this dominant country is willing to inflict[14]) the inferior areas would lose more by a cumulative increase in protection than by the inevitable consequences of the 'free' markets. It is equally certain that a very considerable dose of protection is needed to avert the stifling impact of 'free' markets on enterprise in 'inferior' countries. Even more certain is it that the proponents of the orthodox theory of international trade have

[13] *Cf.*, for example, Professor MacMahon Ball, *Communism and Nationalism in Asia* (Melbourne, 1954).

[14] As the likelihood of retaliation is increased by the pseudo-moral justification of 'free' markets by economists, they are in fact conniving at, and increasing the likelihood of, a maldistribution of income both nationally and internationally.

not even begun to comprehend the complexities of the questions falling into the field of welfare economics and economic dynamics that they assume away without any discussion by their simple models and logic.[15]

11. Only after the special advantages of the dominant country due to its size and wealth have been diminished sufficiently to establish tolerable absolute conditions in inferior countries (or a consciously tolerated inequality in income) can the orthodox theory of comparative costs come into its own. By making impossible the advent of this relative equality through insistence on a premature opening of trade, the orthodox theory is postponing its own validation and endangering the stability of the non-Soviet orbit.

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[15]A very good example is furnished by Professor Haberler ('Welfare and Freer Trade,' *Economic Journal*, 1950, p. 777), who thinks that his opportunity cost map is 'quite compatible' with Little's formulation of superior welfare criteria (though Little emphasised the importance of distribution). Haberler goes on unsuspectingly to say that 'we should experiment with alternative hypothetical valuations', blissfully ignoring that his whole case ('Some Problems in the Price Theory of International Trade,' *Economic Journal*, 1950, p. 223) initially rested on being able to assume 'that modern welfare economies had, however, shown that in the following sense the situation after trade can be said to be better than before, if income were appropriately redistributed every individual would be made better off than before. It is not necessary that income will actually be redistributed.'

## HOUSEHOLD STRUCTURE AND FAMILY INCOME

THE differences that exist in the proportion of earners to dependants in private households have always been recognised as being of great importance both to the economic well-being of the family and to economic and social policy. The aim of this note is to set out some of the data available on the structure of private households and to comment briefly on their significance.

Behind most discussions of wages, housing and the social services there is commonly a model of the typical family or household as consisting of father, mother and young children, and dependent upon the father's earnings. Although most people would admit that such a model cannot be applied rigidly it is nevertheless used. It is doubtful, however, whether the model is even near enough to the truth to provide a basis for realistic discussion.

The 1951 Census showed in Great Britain an occupied population of 21·3m. At the same date the number of private households was 14·48m., so that there were nearly 1·5 earners per household.

Of the 14·48m. households, only 6·78m. (49 per cent.) had only one earner; of these, 3·3m. had no children under 16; about 100,000 of those with children had no other adult besides the earner, and approximately the same number had more than two adults. In other words, at most only about 3·2m. or 22 per cent. of all households were composed of two adults and young children with one adult earning. The model holds, therefore, for less than one household in four. The number of one-earner households with some dependents including children was 3·48m.

If we look at the same figures from the point of view of the wage-earner, the figure of 1·5 earners per household suggests that perhaps two-thirds of earners might be in the 'responsible' position of head of household and one-third in the less responsible position of lodger, son, daughter living at home, and so on. The Census figures, however, are capable of more detailed analysis.

Of 14·48m. households, 2·03m. have no earners at all. The difference, 12·45m., can be taken as representing the earning heads of households in the total occupied population of 21·3m. These will be referred to as primary earners.

Some of these primary earners live in households where everybody is working and where there are therefore no dependants. Since the discussion here is concerned with dependants and relative responsibility, primary earners in this group ought to be counted as having no more responsibility than lodgers, etc.

There are 631,700 such 1-person households
996,100 „ 2 „ „
259,700 „ 3 „ „
110,000[1] „ 4 „ „
30,000[1] „ 5 „ „

2,027,500

[1] Estimate.

The deduction of this group of primary earners reduces the number presumed to have some family responsibility to 10·42m., that is about half the total occupied population. But even within this group responsibility is not the same for all. Though all are primary earners in households with dependants the number of such dependants varies, and some households have more than one earner.

Those who are in the position of being the sole earner in households with dependants including young children amount to 3·48m. out of the 10·42m. The number of primary earners in households with no dependants and those with more than one earner is also known. The whole of the occupied population can therefore be described in terms of presumed household responsibility as follows:

TABLE I

OCCUPIED POPULATION CLASSIFIED ACCORDING TO PRESUMED HOUSEHOLD RESPONSIBILITY

| | Occupied population in each group | |
|---|---|---|
| | (Millions) | (%) |
| *a*. Primary earners who are the sole earners in households where there are dependants including children under 16 . . . . | 3·48 | 16·5 |
| *b*. Primary earners who are the sole earners in households where there are other dependants (usually one adult)[1] . . . . . | 2·67 | 12·5 |
| *c*. Primary earners in households with some dependants but with two or more earners . | 4·27 | 20·0 |
| *d*. Primary earners living alone or in households where everybody is working . . . . | 2·03 | 9·5 |
| *e*. Secondary earners, *i.e.* the second and subsequent earners in groups (*c*) and (*d*) and presumed to be without direct household responsibility . . . . . | 8·85 | 41·5 |
| | 21·30 | 100·0 |

[1] The number of one-earner households without children minus the number of one-earner households of one person.

Thus the occupied population can be divided into two classes of almost equal size. In the above table the last two groups presumed to have no direct responsibility make up 10·88m. and the three top groups with varying degrees of responsibility account for the remaining 10·42m. The most interesting feature, however, is the smallness of the first group, which, it is safe to assume, represents the working heads of households with a wife and young children. This group represents only one in six of all earners and even if the next group (earners in other single-earner households) is added, it still accounts for less than one in three of all earners.

The proportion of earners to dependants in households varies in different parts of Great Britain. It has been possible to make the same calculations as those presented above for a sample of 948 private households in the Govan district of Glasgow. The categories used are the same as those employed above but their descriptions have been shortened.

TABLE II

OCCUPIED POPULATION OF GREAT BRITAIN AND GOVAN COMPARED IN TERMS OF PRESUMED HOUSEHOLD RESPONSIBILITY

| | Proportion of occupied population in each group | | Number of occupied persons in each group |
|---|---|---|---|
| | Great Britain | Govan | Govan |
| Primary earners with children | 16·5 | 9·5 | 162 |
| Primary earners with other dependants | 12·5 | 11·5 | 203 |
| Primary earners with other earners and dependants | 20·0 | 21·5 | 372 |
| Primary earners with other earners and no dependants | 9·5 | 10·0 | 173 |
| Secondary earners | 41·5 | 47·5 | 819 |
| Total occupied population | 100·0 | 100·0 | 1,729 |

In Govan the model of the wage-earner as the sole earner in a household with dependants including children applies even less than in Great Britain. It applies to only about 17 per cent. of households and describes the position of less than one out of every ten earners.

The two groups of earners presumed to have no direct responsibility represent in Govan almost 60 per cent. of the occupied population, or two out of five.

The larger number of earners per household in Govan and consequently the larger number without direct responsibility is partly a reflection of the occupational structure of the area. In Great Britain, households of unskilled labourers have more earners per household than the average. Households in this group with two earners and three or more earners form 29 per cent. and 20·5 per cent. respectively of the total for households of unskilled labourers, as against an average for all households of all socio-economic groups of 26 per cent. and 12·8 per cent. respectively.

TABLE III

PROPORTION OF HOUSEHOLDS IN GREAT BRITAIN WITH SEVERAL EARNERS

| | All Households | | Unskilled labourers[1] | |
|---|---|---|---|---|
| | (Millions) | (%) | (Millions) | (%) |
| Total . . . . | 14·48 | 100 | 1·39 | 100 |
| With two earners . | 3·80 | 26 | ·41 | 29 |
| With three or more earners . . . | 1·86 | 12·8 | ·29 | 20·5 |

[1] Socio-economic group 12.

The proportion of earners per household is also high among skilled and semi-skilled manual workers: in both groups there are 29·5 per cent. of the households with two earners and 14 per cent. and 18 per cent. respectively with three or more.

The occupational structure of Govan is heavily weighted in favour of manual occupations compared with the whole of Great Britain. The Census classifies 52 per cent. of all households in Great Britain, on the basis of the occupation of the primary earner, as belonging to the manual socio-economic groups (Groups 9, 10, 11, 12). The comparable figure for Govan is 77·3 per cent. This district, therefore, might be expected to produce a larger than normal number of earners per household.

Even within the same occupational grouping, Govan consistently has more households with several wage-earners than the average for Great Britain, as the following table shows:

TABLE IV

PROPORTION OF HOUSEHOLDS WITH SEVERAL EARNERS

| | Great Britain | Govan |
|---|---|---|
| Skilled manual workers | | |
| Proportion of households with two earners | 29·5 | 26·5 |
| with three or more earners | 14·0 | 22·0 |
| Unskilled labourers | | |
| Proportion of households with two earners | 29·5 | 33·0 |
| with three or more earners | 20·5 | 30·5 |

The proportion of multiple-earner households among unskilled labourers' households in Govan is very high. A separate analysis of this small group, which comprised 209 households, shows than in only thirty-eight (18 per cent.) is there only one earner and children-dependants. This compares with the figure of 22 per cent. for Great Britain given earlier. Out of the whole labour force of 455 unskilled labourers in the sample this represents a little over 8 per cent., or one out of every twelve. At the opposite end of the scale, the proportion of unskilled labourers who have no direct responsibility is around 65 per cent.

It would be interesting if comparable figures could be calculated for Scotland and Glasgow but the way in which the Census data are presented for these areas does not allow such an analysis to be made. Nevertheless, data are available on the two factors most obviously connected with varying degrees of responsibility of wage-earners, *i.e.* the proportion of households with several earners and the proportion of the occupied population engaged in manual work.

The proportion of households with three or more earners is 13·5 per cent. of all households in Scotland and 16 per cent. in Glasgow compared with 12·8 per cent. in Great Britain and 22 per cent. in Govan.

The proportion of unskilled labourers' households among all households is 11 per cent. and 13 per cent. respectively for Scotland and Glasgow compared with 9·5 per cent. and 22 per cent. respectively for Great Britain and Govan.

In both series of figures the order of ranking of areas is Great Britain first, followed by Scotland, Glasgow and Govan. Since both sets of figures have been taken as indices of the degree of household responsibility of wage-earners, it is safe to assume that in this respect the situation in Scotland and in Glasgow lies between that described

for Great Britain and that described for Govan, and further that both lie nearer to the British than to the Govan position.

The significance of these facts to the discussion of a wide range of social problems is clear. The classic model of the one-earner household with dependants applies only to a minority of households and describes the responsibility of the typical wage-earner even less accurately. Any attempt to relate wages or earnings to standard of living must take account of this.

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## CURRENT TOPICS

## THE SCOTTISH ECONOMIC SOCIETY, 1954-55

In its first year in its new form, the Scottish Economic Society has been successful in arousing a good deal of interest in its chief aim of encouraging serious discussion of social and economic issues in Scotland. Its inaugural meeting in March 1954 was widely and favourably reported by the National Press, and the leading Scottish newspapers have from time to time commented on articles published in the "Scottish Journal of Political Economy." By the end of December 1954 just over 300 members had joined the Society, a number which may be interpreted as promising, but by no means satisfactory in a country which has many social and economic problems, worthy of serious study, to which widespread publicity is often given. Without the support of the Scottish Universities, the financial effort of launching a new periodical would have proved impossible, and a big increase in membership is still needed if this support is to become unnecessary. The membership of the Society, however, does not give a complete picture of the demand for the "Journal." Its total circulation has been about 500 per issue.

Since March 1954 the chief new development in furtherance of the Society's aims has been the start made with local branches. In Edinburgh there have been three meetings, in Glasgow two, and in Aberdeen four. In Edinburgh and Glasgow the meetings have been held in the halls of the Institute of Chartered Accountants of Scotland, and in Aberdeen in the Chamber of Commerce rooms, and the Society is grateful to these organisations and to others, such as the Faculty of Actuaries, the Edinburgh and Glasgow Chambers of Commerce and several of the leading Scottish Banks, for assistance, support and co-operation given in this and in other ways. In St. Andrews, the Society's activities have been linked with the work of the Political Economy Club in the University, and in Dundee it is hoped to make a start soon along the lines of the other branches.

The average attendance at branch meetings seems to be between thirty and fifty, which shows that they have achieved their object in appealing to non-members, to whom they have been open, as well as to members. The local Committees have taken care to publicise the meetings and get audiences that are widely representative of the community as a whole, and from each centre there have been reports of lively discussions stimulated by the papers read. To take one example only: at the last meeting in Aberdeen several trade unionists were prominent in the excellent discussion which followed an address on American Trade Unions by the Labour Information Officer from

the American Embassy. The local meetings have ranged widely in their topics, only four out of nine being concerned with specifically Scottish subjects, as will be seen from the syllabus of meetings appended.

Five of the Scottish Banks have made special contributions to the Society, under an arrangement whereby only half of the contribution is paid in exchange for copies of the "Journal," the balance being allocated to the Society's objective of stimulating discussion in Scotland of social and economic problems. This money should enable the local Committees to improve their programme of meetings in 1955-56.

LOCAL MEETINGS ARRANGED IN 1954-55

*Edinburgh Branch.*

26th January, 1955. "Economic Development and Political Evolution in the Canadian North"—Professor J. Wreford Watson, Ph.D., F.R.S.C. (Illustrated by slides.)

23rd February, 1955. "The Investment of Life Assurance Offices"—J. Binns, Esq., F.I.A.

23rd March, 1955. "Compulsory Arbitration in Scottish Industrial Disputes"—Miss M. T. Rankin, D.Phil.

*Glasgow Branch.*

2nd December, 1954. "Development Area Policy Re-Considered"—Professor A. K. Cairncross, C.M.G., M.A.

28th January, 1955. "Bank Rate in the Twentieth Century"—Professor R. S. Sayers, M.A.

*Aberdeen Branch.*

27th October, 1954. "Impressions of America"—D. L. Munby, Esq., M.A.

7th December, 1954. "The Crofting Commission Report"—Principal Sir Thomas Taylor, C.B.E., Q.C., M.A., LL.B., D.D., LL.D., F.R.S.E., F.E.I.S.

1st February, 1955. "Does Scotland Prosper?"—A. D. Campbell, Esq., M.A.

28th February, 1955. "American Trade Unions"—W. C. Gausmann, Esq., Labour Information Officer, U.S. Embassy.

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Professor A. K. Cairncross has been appointed Director of the Economic Development Institute which is to be established by the International Bank for Reconstruction and Development in Washington, and has been granted leave of absence by the University of Glasgow from the end of June 1955 to December 1956. At the Annual General Meeting of the Scottish Economic Society on 24th March 1955 it was agreed that in his absence in U.S.A. Professor A. L. Macfie and Mr. A. D. Campbell of the University of Glasgow should act as Joint Interim-Editors of the "Scottish Journal of Political Economy."

The Council has received with regret the resignation of Mr. J. A. Thomson, F.F.A., for reasons of ill-health. Mr. Thomson was a prominent member of the former Scottish Society of Economists and had played an important part in promoting the transformation of that Society into its new form. He had shown great interest in promoting the activities of the Scottish Economic Society, and in publicising it among his professional colleagues in the Faculty of Actuaries in Edinburgh.

Mr. F. S. Taylor, Secretary of the Institute of Bankers in Scotland, has been elected a Member of Council in place of Mr. J. A. Thomson.

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## SCOTTISH ECONOMIC SOCIETY
## STATEMENT OF ACCOUNTS

for period from date of formation to 14th October 1954

| | | | |
|---|---|---|---|
| *Income:* | | | |
| Membership subscriptions ... ... ... ... | | | £29 7 7 |
| Namely | | | |
| 269 members at £1:1:0d ... ... | £282 9 0 | | |
| 3 members at 15/- ... ... ... | 2 5 0 | | |
| 8 overseas members at various amounts converted to sterling ... | 9 16 0 | | |
| 280 | £294 10 0 | | |
| 2 members subscribed as from second issue—proportion carried forward to 1955 ... ... ... | 0 14 0 | | |
| | £293 16 0 | | |
| Due to Oliver & Boyd for Journal 90% | 264 8 5 | | |
| | £29 7 7 | | |
| | | £29 7 7 | |
| *Expenditure:* | | | |
| Subscription to Royal Economic Society ... ... ... | | £1 10 0 | |
| Treasurer's Outlays: | | | |
| Stationery ... ... ... ... ... | £9 16 1 | | |
| Postages ... ... ... ... ... | 3 4 6 | | |
| Bank charges and cheques ... ... | 0 15 6 | | |
| | | 13 16 1 | |
| | | £15 6 1 | |
| *Balance on hand:* | | | |
| Balance for period ... ... ... ... ... ... | | £14 1 6 | |
| Funds of Scottish Society of Economists taken over... ... ... ... ... | £70 8 2 | | |
| Less: Expenses paid ... ... ... | 2 13 6 | | |
| | | 67 14 8 | |
| | | £81 16 2 | |

## RECENT ECONOMIC TRENDS

### POST-WAR TRENDS IN INDUSTRIAL OUTPUT, EMPLOYMENT AND PRODUCTIVITY AN INTERNATIONAL COMPARISON

THE purpose of this note is to compare the movements of industrial output, employment and productivity since 1948 in a number of European countries and the U.S.A. and to comment briefly on one or two points relating especially to Germany which emerge from the comparisons. The post-war period is now long enough for a discussion of trends to become more meaningful and the raw material for such a discussion on an international basis is readily available in the statistical publications of the United Nations.

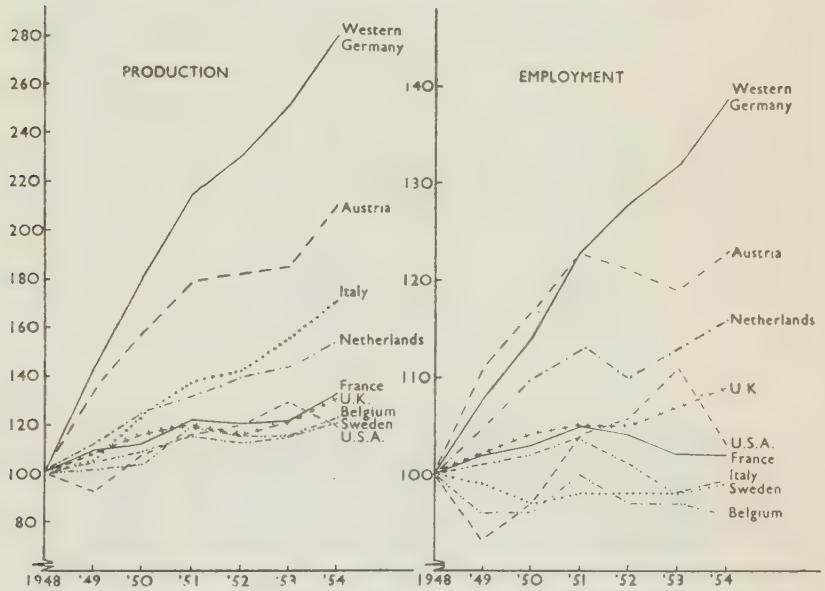
The statistics used relate to the manufacturing, mining and quarrying, and gas, water and electricity sectors of nine industrial countries; they exclude building. The employment indices relate as nearly as possible to wage and salary earners in the same industries.[1] The productivity series are obtained by a simple division of the output indices by the indices of employment. The basic data have been rendered comparable, as far as possible, by the Research and Planning Division of the Economic Commission for Europe but some inconsistencies in the data inevitably remain. In addition, comparability is impaired by the uneven quality of the various national statistics and there are a number of well-recognised conceptual difficulties which encumber international comparisons of any kind. In spite of these drawbacks the data seem adequate for a simple analysis of the outstanding trends.

*Production*

The indices of industrial production are set out in Table I and are shown in Fig. I. The immediate impressions obtained from inspection of Fig. I are, on the one hand, the rapid rise of output in Western Germany and Austria and, to a lesser extent, Italy and the Netherlands, and on the other, the considerably lower and more nearly similar rates of advance in all the other countries.

[1] Indices of industrial output and employment in Europe are taken from the *Economic Bulletin for Europe*, E.C.E., Vol. 4, Nr. 3, Nov. 1952, pp. 81-2; and the *Economic Survey of Europe in 1954* (Feb. 1955), E.C.E., pp. 199 and 204. Industrial production in Belgium in 1937 from the *Monthly Bulletin of Statistics*, U.N., Dec. 1954, p. 20. Industrial production in the U.S.A. is confined to manufacturing and mining and is from the *Federal Reserve Bulletin*, Feb. 1955, p. 187. Industrial employment for 1948 - 54 from ibid., p. 194, and for 1938 from *Business Statistics, 1951, Supplement to the Survey on Current Business*, p. 53.

The growth of German industrial production has by all standards been extremely rapid: It has almost trebled in the course of six years, the sharpest increase being in 1948 - 51 when the average annual rate of growth was almost 30 per cent. The period of stagnation which affected most countries after the Korean war is evident in Germany also, but it merely slowed down the rate of growth to just over 7 and 9 per cent. in 1952 and 1953. The general revival in 1954 is registered in the German figures by an increase of 11·5 per cent., a figure rather higher than in 1952 - 3 but well below the average for 1949 - 51.




Industrial output and employment in nine countries, 1948 - 54. (1948 = 100.)

FIG. I

Austria exhibits the largest expansion after Germany. Production more than doubled in 1948 - 54 and the average annual rate of growth amounted to 13·8 per cent. compared with 19·4 per cent. in Western Germany. The pattern of change is similar in both countries except that the recession in 1952 - 3 had a greater impact on Austria where output increased by only about 1 - 2 per cent. per annum after an increase of more than 13 per cent. in 1951.

Italy follows with an increase of 71 per cent. in 1948 - 54 and in the Netherlands industrial production increased by 55 per cent. in the same period. The break in trend reflecting the setback after the outbreak of war in Korea is shown by both countries: in the Netherlands in 1951 - 2 and in Italy in 1952. Recovery set in in 1953, a year

earlier than in Austria, but neither country in 1953 or 1954 reached the rate of growth of the peak years of 1949 (Netherlands) and 1950 (Italy).

TABLE 1

INDUSTRIAL PRODUCTION AND EMPLOYMENT IN NINE COUNTRIES, 1948 - 54
1948 = 100

| | *Austria* | | *Belgium* | | *France* | | *Western Germany* | | *Italy* | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Production | Employment | Production | Employment | Production | Employment | Production | Employment | Production | Employment |
| 1948 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1949 | 134 | 111 | 101 | 96 | 109 | 102 | 144 | 108 | 105 | 99 |
| 1950 | 158 | 117 | 103 | 96 | 112 | 103 | 181 | 114 | 122 | 97 |
| 1951 | 179 | 123 | 119 | 100 | 122 | 105 | 215 | 123 | 137 | 98 |
| 1952 | 182 | 121 | 116 | 97 | 121 | 104 | 231 | 128 | 142 | 98 |
| 1953 | 185 | 119 | 116 | 97 | 122 | 102 | 252 | 132 | 155 | 98 |
| 1954[a] | 211 | 123 | 123 | 96 | 133 | 102 | 281 | 139 | 171 | 99 |

| | *Netherlands* | | *Sweden* | | *United Kingdom* | | *U.S.A.* | |
|---|---|---|---|---|---|---|---|---|
| | Production | Employment | Production | Employment | Production | Employment | Production | Employment |
| 1948 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1949 | 112 | 105 | 105 | 101 | 107 | 102 | 93 | 93 |
| 1950 | 123 | 110 | 109 | 102 | 115 | 104 | 107 | 97 |
| 1951 | 128 | 113 | 115 | 104 | 120 | 105 | 115 | 104 |
| 1952 | 130 | 110 | 113 | 101 | 116 | 105 | 119 | 106 |
| 1953 | 144 | 113 | 115 | 98 | 122 | 107 | 129 | 111 |
| 1954[a] | 155 | 116 | 121 | 99 | 131 | 109 | 120 | 103 |

[a] All statistics for 1954, other than for the U.S.A., are based on the first nine months of the year and are provisional. The estimates for the whole year were obtained by applying to 1953 the ratio of the average of the first nine months of 1954 to the first nine months of 1953.

In none of the other countries analysed did industrial production increase to a comparable extent. France ends up in 1954 with the highest increase (33 per cent.) and it is followed by the U.K. (31 per cent.), Belgium (23 per cent.), Sweden (21 per cent.) and the U.S.A. (20 per cent.). In the U.S.A., however, production in 1953 showed a bigger increase above the level of 1948 (29 per cent.) Each of these countries, except the U.S.A., suffered an actual decline in 1952 and the U.K. and Belgium were the most affected. In the U.S.A., as in Germany, Austria, Italy and the Netherlands, output continued to expand in that year though at a reduced rate. The greatest rate of recovery after the 1952 - 3 period of stagnation was in France.

In addition to the minor setback in 1952, the U.S.A. suffered more serious recessions in 1949 and 1954. In both years industrial output declined by approximately 7 per cent. There is no corresponding movement in any of the other countries in 1954, and in 1949 only Belgium shows a sympathetic movement—but there was no absolute decline. Nor do any of the other countries share the peak in industrial production in the U.S.A. in 1953. The growth of output in the U.S. economy has therefore not only been subject to more fluctuation but has at times moved inversely to the fluctuations in Europe.

The average rates of growth of industrial output in 1948 - 54 for the nine countries by order of rank are set out in Table 2.

TABLE 2

AVERAGE ANNUAL RATES OF GROWTH OF INDUSTRIAL OUTPUT IN NINE COUNTRIES, 1948 - 54

| | % | | % | | % |
|---|---|---|---|---|---|
| Western Germany | 19·4 | Netherlands . | 7·6 | Belgium . . | 3·7 |
| Austria . . | 13·8 | France . . | 4·9 | U.S.A. . . | 3·4 |
| Italy . . . | 9·4 | United Kingdom . | 4·7 | Sweden . . | 3·3 |

*Employment*

The greatest increases in employment occurred in Western Germany, Austria and the Netherlands. In Germany, industrial employment in 1954 was almost 40 per cent. up on 1948 and the average rate of growth amounted to 5·7 per cent. In Austria and the Netherlands the corresponding percentages for the total expansion in employment were 23 and 16, and for the average rates of growth 3·6 and 2·5 respectively. The trends in all three countries rise sharply to 1951, then with the Korean war and the textile slump, register a setback in 1952 - 3 (evident in Germany only in a slackening of the rate of growth), and finally resume the upward movement in 1953 - 4. The rates of increase were not, however, as great as before 1951 and the final outcome over the whole of the period in Austria and the Netherlands (but not Germany) appears as a sharp increase in 1948 - 51 and a distinct levelling off thereafter (Fig. I).

In the U.K., industrial employment in 1954 was some 9 per cent. above the level of 1948 and the average rate of growth was 1·5 per cent. Except for 1952, when there was no increase, and 1951, when the increase was merely of the order of 1 per cent., the upward trend was remarkably steady and at the rate of nearly 2 per cent. per year.

In contrast, the index for the U.S.A. fluctuates more widely, in parallel with industrial output, and moves in step with developments in Europe only during and immediately after the Korean war. The gain in 1954 over 1948 was only 3 per cent. though it stood at 11 per cent. in the peak year of 1953.

A smaller rise still in the trend of employment is shown by France where the level in 1954 was only 2 per cent. above 1948. A higher level had prevailed, however, in 1951 (5 per cent. above 1948).

In Italy the volume of employment was practically static except for a dip in 1950. The level of employment in 1954 actually appears to have been below the level of 1948. The same applies to Belgium and Sweden. Both these countries show a peak in 1951 but the downward trend that followed has not been reversed in Belgium and has only just been reversed in Sweden in 1954.

Table 3 gives the average rates of growth in employment for each of the nine countries over the period 1948 - 54. The figures are given, as in Table 2, in order of rank.

TABLE 3

AVERAGE ANNUAL RATES OF GROWTH OF INDUSTRIAL EMPLOYMENT IN NINE COUNTRIES, 1948-54

| | % | | % | | % |
|---|---|---|---|---|---|
| Western Germany | 5·7 | United Kingdom | 1·5 | Sweden | −0·1 |
| Austria | 3·6 | U.S.A. | 0·6 | Italy | −0·2 |
| Netherlands | 2·5 | France | 0·3 | Belgium | −0·6 |

Thus in all countries examined, except Belgium and possibly Italy and Sweden, industrial employment has increased and so has been one of the factors contributing to the expansion of output. Comparison of Tables 2 and 3 shows moreover that the order of rank for the nine countries is similar, indicating that the countries with the largest increases in output also experienced the greatest growth in employment, and that the smallest gains in output occurred where employment increased least or not at all. The one major exception is Italy where large gains in output—surpassed only by Germany and Austria—were accompanied by virtually static employment. The expansion of output in Italy must clearly be attributed entirely to higher productivity. Comparison of the magnitude of the rates of increase of production and employment in Tables 2 and 3 indicates also that by far the more important factor in the expansion of output in all countries has been the growth of productivity rather than employment.

*Productivity*

The indices of productivity are set out in Table 4.[1] The striking feature of the table is again the rapid advance of Western Germany, followed closely by Austria and Italy. The rate of advance in these three countries again outstrips by a long way the rates of progress in all other countries included in the table.

TABLE 4

OUTPUT PER PERSON EMPLOYED IN NINE COUNTRIES, 1938 AND 1948 - 54

1948 = 100

| | *1938* | *1948* | *1949* | *1950* | *1951* | *1952* | *1953* | *1954* |
|---|---|---|---|---|---|---|---|---|
| Western Germany | 192 | 100 | 133 | 159 | 175 | 180 | 191 | 202 |
| Italy . . . | 109 | 100 | 106 | 126 | 140 | 145 | 158 | 173 |
| Austria . . | 151[a] | 100 | 121 | 135 | 146 | 150 | 155 | 172 |
| Netherlands . | 128 | 100 | 107 | 112 | 113 | 118 | 127 | 134 |
| France . . | 101 | 100 | 107 | 109 | 116 | 116 | 120 | 130 |
| Belgium . . | 123[a] | 100 | 105 | 107 | 119 | 120 | 120 | 128 |
| Sweden . . | 88 | 100 | 104 | 107 | 111 | 112 | 117 | 122 |
| United Kingdom | 89 | 100 | 105 | 111 | 114 | 110 | 114 | 120 |
| U.S.A. . . | 74 | 100 | 101 | 110 | 110 | 113 | 116 | 117 |

[a] 1937.

In Western Germany industrial output per person employed rose by 102 per cent. in the period from 1948 - 54 and the average rate of increase was equal to 12·9 per cent. per annum. The corresponding rates for Italy and Austria were 9·7 and 9·6 per cent. and the gain in 1954 over 1948 amounted to 73 and 72 per cent. respectively. High increases in productivity, but amounting nevertheless to no more than about one-third of the increase in Germany and less than one-half of the increases in Austria and Italy, were achieved in the Netherlands (34 per cent.) and France (30 per cent.). Belgium and Sweden follow with 28 and 22 per cent. respectively, and the lowest increases of all were shown by the U.K. (20 per cent.) and the U.S.A. (17 per cent.).

[1] Two sets of indices have been worked out: one relating output to the number of persons employed and the other allowing for the average number of hours worked in manufacturing (*O.E.E.C. Statistical Bulletin*, Jan. 1955, p. 60). The latter could not be calculated for Belgium and Sweden as the statistics are not readily available and only the first set of statistics are reproduced in Tables 4 and 5. Except for year to year divergences, both series suggest the same conclusions.

The average annual rates of growth for the nine countries, again ranked according to the size of the increase, are compared in Table 5.

TABLE 5

AVERAGE ANNUAL RATES OF GROWTH IN OUTPUT PER PERSON EMPLOYED IN NINE COUNTRIES, 1948 - 54

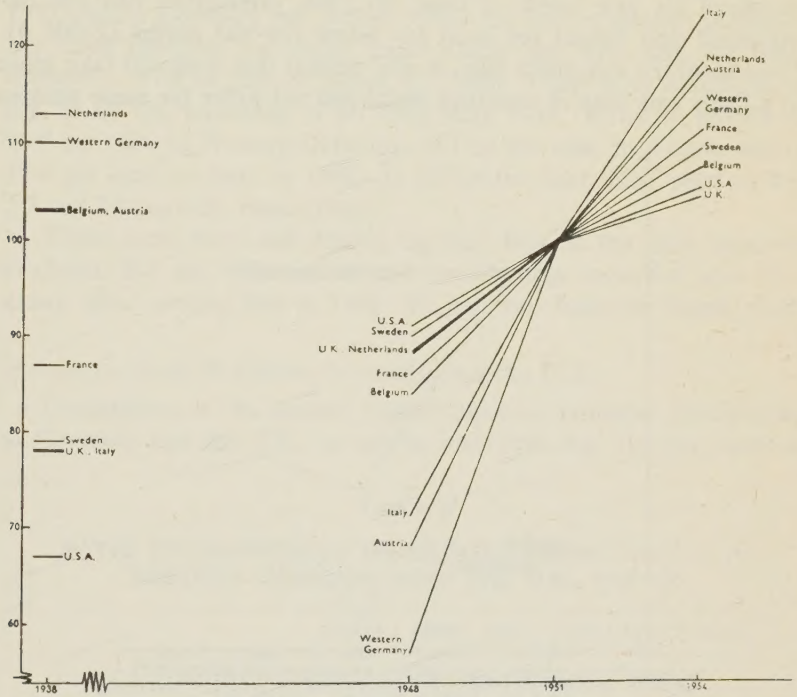
| | *1948 - 54* | *1948-51* | *1951-54* |
|---|---|---|---|
| | % | % | % |
| Western Germany | 12·9 | 20·9 | 4·9 |
| Italy | 9·7 | 12·0 | 7·4 |
| Austria | 9·6 | 13·6 | 5·7 |
| Netherlands | 5·0 | 4·2 | 5·8 |
| France | 4·5 | 5·1 | 3·9 |
| Belgium | 4·3 | 6·0 | 2·5 |
| Sweden | 3·4 | 3·5 | 3·2 |
| United Kingdom | 3·1 | 4·5 | 1·8 |
| U.S.A. | 2·7 | 3·3 | 2·1 |

The pattern of growth in productivity broadly follows the cyclical course already described for output and production. Production has clearly been subject to fluctuations of a wider amplitude than employment. The highest rates of growth in productivity were achieved in 1948 - 51 but there is no clear peak. Germany, Austria, the Netherlands, Sweden and France enjoyed the greatest gain in productivity in 1949; Italy, the U.K. and the U.S.A. in 1950; and Belgium in 1951. The recession which followed the Korean war, on the other hand, was concentrated very largely on 1952 although the trough in the U.S.A. and the Netherlands is located in 1951 and in Belgium in 1953. Its incidence was most strongly felt by the U.K. which was the only country which suffered an absolute decline in productivity. In France output per person employed appears to have remained static in 1952, and the same applies to Belgium in 1953, and in the U.S.A. there was no advance in 1951. Elsewhere the recession is apparent only in reduced rates of growth. There was a general recovery in 1953 - 4 in all countries except the U.S.A., but apparently only in France and Sweden at a higher rate than in the best year before the recession. In the U.S.A. by contrast the rate of growth of productivity slackened as a consequence of the sharp recession in 1954.

### *The German Recovery*

The rapid pace of industrial recovery in post-war Germany is easily the most spectacular feature which emerges from the tables. For some

years Germany has been the theme of politicians eager to demonstrate the virility of a predominantly private enterprise economy; and its economic achievements have aroused controversy amongst economists and envy and alarm in the business community. There are, however, some less obvious elements in the German situation which suggest that the *rapidity* of the industrial expansion in recent years is not likely to be sustained in the future



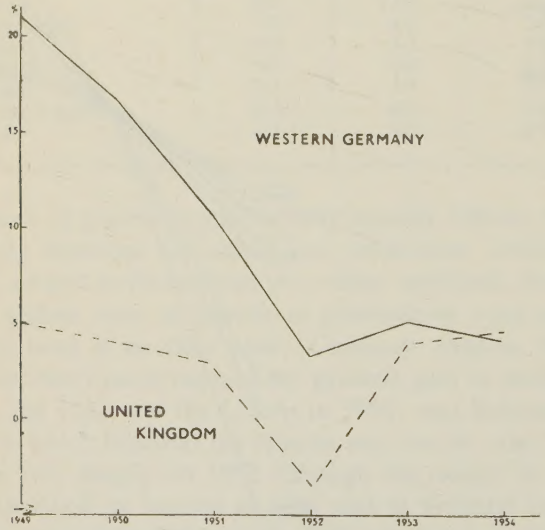

Output per person employed in nine countries, 1938, 1948, 1951 and 1954. (1951 = 100.)

FIG. II

To the extent that expansion in output has depended on the growth of industrial manpower, there are signs that a slowing up has either already occurred or is imminent. The number of young persons reaching working age was at a peak in 1954 and is now expected to decline until 1960. The influx from the east (including Berlin, the Soviet Zone, and the ex-German territories in the east) which has ranged between 200,000 and nearly 400,000 in recent years, is likely to fall off, and has indeed already fallen from the peak of 377,000 in 1953 to 286,000 in 1954. At the same time, rearmament will claim an increasing proportion of total manpower. There is still scope for

a reduction in unemployment from its seasonal minimum of 800,000 in the summer of 1954 but the regional and occupational make-up of this total suggests that any such reduction would be gradual. All things considered, the growth in industrial manpower seems unlikely to maintain the extraordinary momentum of recent years.

Similarly, the extremely high average rate of increase in productivity which was achieved in Germany in 1948 - 54 is not likely to be sustained for any length of time. In 1948, production was still disorganised and output per head far below pre-war norms (Table 4). Once recovery was under way, it was natural that it should take place at a faster rate than in countries which did not suffer the same amount




Rate of increase in output per man-hour in Western Germany and in the United Kingdom, 1948 - 54.

FIG. III

of destruction. Widespread capital starvation through destruction and obsolescence of plant, bottlenecks in materials and capacity, and an expanding market at home and abroad, created an economic environment favourable to rapidly increasing returns for capital investment. In Germany, as in other countries similarly circumstanced, as these difficulties are gradually overcome and conditions approach or exceed pre-war standards, the growth of productivity must inevitably slacken.

This point is illustrated by Table 4 which shows that it was in those countries that had the lowest level of output per head in 1948 compared with the pre-war level that growth in industrial productivity

was most rapid. Taking 1948 as a base, the index for Western Germany stood at 192 in 1938 and for Austria it stood at 151 in 1937. Of all countries included in Table 4, only the U.S.A., the U.K., and Sweden had by 1948 an output per head greater than in 1938 and these countries show the lowest rate of growth in industrial productivity since 1948. As pre-war productivity levels were again approached or attained in the other countries—in Italy in 1949 - 50, in Austria in 1952 and in Germany not before 1953—the rate of growth in output per head declined and came more nearly into line with the other countries. This is clearly shown by Table 5 and it is illustrated in Fig. II by the bunching of all lines atfer 1951. Rates of growth of 20·9 per cent. in Western Germany, of 13·6 per cent. in Austria and of 12·0 per cent. in Italy in 1948 - 51 fell in the next three years to 4·9, 5·7 and 7·4 per cent. respectively.

These rates were still among the first four of the nine countries analysed, but the differentials had considerably narrowed and Germany, after ranking first in 1948 - 51, had now fallen to fourth place.

*Productivity in Western Germany and the U.K.*

Comparison of the annual improvement in industrial productivity in Germany and the U.K., as can be seen from Fig. III and Table 6,

TABLE 6

RATES OF GROWTH OF INDUSTRIAL PRODUCTIVITY IN WESTERN GERMANY AND THE U.K., 1948 - 54

| | *1949* | *1950* | *1951* | *1952* | *1953* | *1954* |
|---|---|---|---|---|---|---|
| *Percentage increase in output per person employed* | | | | | | |
| Western Germany[1] | 33·0 | 19·5 | 10·1 | 2·9 | 6·1 | 5·8 |
| United Kingdom | 5·0 | 5·7 | 2·7 | −3·5 | 3·6 | 5·3 |
| *Percentage increase in output per man-hour* | | | | | | |
| Western Germany[2] | 21·0 | 16·5 | 10·6 | 3·2 | 5·0 | 4·1 |
| United Kingdom | 5·0 | 3·8 | 2·8 | −3·5 | 3·7 | 4·5 |

[1] The figures diverge slightly from the official U.K. index (Economic Survey for 1955. Cmd. (9412), largely because building is excluded from the indices used in this note. The official index indicates somewhat lower rates of increase in 1950 (4·8 per cent.) and 1951 (0·9 per cent.), a smaller decline in 1952 (−2·7 per cent.), a sharper increase in 1953 (5·6 per cent.) and a lower increase in 1954 (4·4 per cent.). In 1949 the rates of increase in both indices are the same.

[2] The statistics of average hours worked in Germany used for the calculation of this index relate to manufacturing and building.

is far less unfavourable to the U.K. than is often supposed. The wide differentials in the rates of growth in 1948 - 52 are immediately evident to the eye, but no less striking is the fact that they were being reduced

year by year until in 1954 output per man-hour increased for the first time at a greater rate in the U.K. than in Germany. Output per man-hour increased in that year by 4·5 per cent. in the U.K. but only by 4·1 per cent. in Western Germany. The advantage in the rate of increase in output per person employed was, however, still with Germany where it increased by 5·8 per cent. as compared to 5·3 per cent. in the U.K.

Though all these figures are subject to a considerable margin of error, the conclusion to which they point is quite clear: that industrial productivity is rising as fast in Britain as in Germany.

B. WEBER

*Glasgow*

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